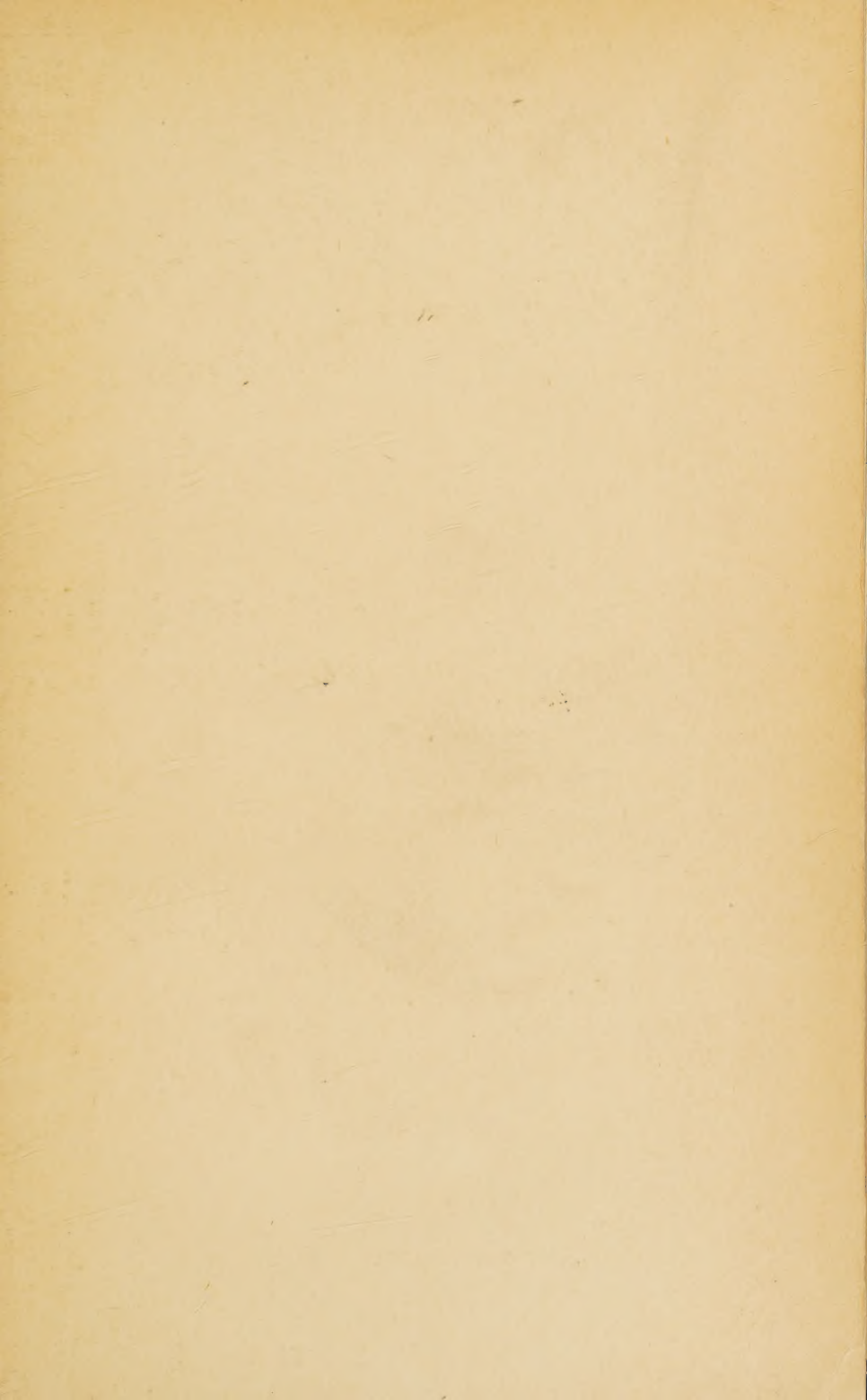


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THE
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RELATING CHIEFLY TO THE YEAR

1941.

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EDITED BY

MALCOLM SMITH

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PREFACE.

THIS Volume, the seventy-eighth, of the Zoological Record, deals mainly with the publications issued during 1941, but includes also those for previous years that were omitted, for various reasons, from previous Volumes.

Articles in non-European languages, unless they are accompanied by an abstract in a European language, are not included. Articles and books which have not yet reached this country, but concerning which knowledge has been obtained from other sources, are recorded as far as the information permits. They will be dealt with more fully when they can be seen by the Recorders.

The War during the past year has not had any appreciable effect upon the amount of zoological literature published. The total number of articles and books dealt with in this Volume is 8,399, an increase of 407 over that of last year.

Thanks are due to those specialists who have kindly assisted with the reading of proofs or in the arrangement of the various Sections. These are Mr. J. R. le B. Tomlin (Mollusca), Mr. R. J. Whittick (Arachnida), Dr. I. Gordon (Crustacea), Mr. J. R. Norman (Pisces), Dr. E. Mayr (Aves), and Mr. A. J. Hopwood (Mammalia).

MALCOLM SMITH,

Editor.

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I. COMPREHENSIVE ZOOLOGY

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W. L. SCLATER, M.A.

This section includes works that deal with more than one branch of Zoology, or that are of general interest to Zoologists. It is, therefore, not complete in itself as regards any one subject included in it. The special records complete each subject. A few memoirs included in the special records are repeated in this division as well as the literature on the Genetics of *Drosophila* and some other insects used as a vehicle for these special researches.

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2. PROTOZOA

ARRANGED BY

CECIL A. HOARE, D.Sc.

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†*Cassidulinoides erecta* sp. n. (p. 25 figs.), Miocene Venezuela, CUSHMAN & RENZ 94.

†*Cibicides blanchi* sp. n., *C. howelli* sp. n. (p. 609 figs.) Eocene Alabama TOULMIN 454.—†*C. repetitoensis* sp. n. (p. 622 figs.) Pliocene California, LE ROY 261.—†*C. hilgardi* sp. n. (p. 155 figs.), *C. williamsoni* sp. n. (p. 156 figs.) Eocene U.S.A., GARRETT 154.—†*C. floridanus* var. n. *compressa* (p. 26 fig.), *C. isidroensis* sp. n. (p. 26 fig.), *C. kugleri* sp. n. (p. 27 fig.) Tertiary Venezuela, CUSHMAN & RENZ 94.

†*Clavulina carinata* sp. n. (p. 8 fig.) Oligocene-Miocene Venezuela, CUSHMAN & RENZ 94.

†*Coleites laevigatus* sp. n. (p. 605 figs.) Eocene Alabama, TOULMIN 454.

†*Cuneolinella* gen. n. *lewisi* sp. n., *C. l.* var. n. *intermedia* (p. 101 figs.) Miocene, CUSHMAN & BERMUDEZ 92.

†*Cycloclypeus victoriensis* sp. n. (p. 305 figs.), *C. v.* var. n. *gippslandica* (p. 309 figs.) Miocene Victoria CRESPIN 77.

†*Dentalina isidroensis* sp. n. (p. 15 figs.), Oligocene-Miocene Venezuela, CUSHMAN & RENZ 94.

†*Dentalinopsis gigantea* sp. n., *D. quadrata* sp. n. (p. 626 figs.) Cretaceous Texas, VIEAUX 471.

†*Digitina* gen. n. *recurvata* sp. n. (p. 306 figs.) Permian Australia, CRESPIN & PARR 78.

†*Discorbis minima* sp. n. (p. 627 figs.) Cretaceous Texas, VIEAUX 471.—†*D. washburni* sp. n. (p. 155 figs.) Eocene U.S.A., GARRETT 154.

†*Eggerella plummeræ* sp. n. (p. 572 figs.) Eocene Alabama, TOULMIN 454.

†*Eggerina* gen. n. *cyindrica* sp. n. (p. 573 figs.) Eocene Alabama, TOULMIN 454.

†*Elphidiella nitida* sp. n. (p. 35 fig.) Alaska, CUSHMAN 88.

†*Epistomina charlottæ* sp. n. (p. 627 figs.) Cretaceous Texas, VIEAUX 471.

†*Eponides dorfi* sp. n. (p. 601 fig.) Eocene Alabama, TOULMIN 454.—†*E. lowei* sp. n. (p. 155 figs.) Eocene U.S.A., GARRETT 154.

†*Flabellamina brachylocula* sp. n., *F. denisonensis* sp. n. (p. 360 figs.) Cretaceous Texas, TAPPAN 443.

†*Fronidicularia lalickeri* sp. n. (p. 626 fig.) Cretaceous Texas, VIEAUX 471.

†*Gaudryina* (*Pseudogaudryina*) *jacksonensis* var. n. *irregularis* (p. 6 figs.), *G. leuzingeri* sp. n. (p. 6 fig.), *G. thalmanni* sp. n. (p. 7 fig.) Oligocene-Miocene Venezuela, CUSHMAN & RENZ 94.

†*Geminospira* gen. n. *simaensis* sp. n. (p. 243 figs.) Pleistocene Japan, MAKIYAMA & NAKAGAWA 286.

†*Globorotalia wilcoxensis* var. n. *acuta* (p. 608 figs.) Eocene Alabama, TOULMIN 454.

†*Gyroidina lottensis* sp. n. (p. 155 figs.) Eocene U.S.A., GARRETT 154.—†*G. planulata* sp. n. (p. 23 fig.), *G. parva* sp. n. (p. 23 fig.) Oligocene-Miocene Venezuela, CUSHMAN & RENZ 94.

†*Haplophragmoides carinatum* sp. n. (p. 2 fig.) Miocene Venezuela, CUSHMAN & RENZ 94.

†*Hemicristellaria brantlyi* sp. n. (p. 154 figs.), *H. hatchetigbeensis* sp. n. (p. 154 figs.), *H. h. var. n. harrisi* (p. 155 figs.) Eocene U.S.A., GARRETT 154.

†*Lagena davoei* sp. n. Lower Lias Dorset, MACFADYEN 278 p. 63 figs.

†*Lepidocyclus* (*Nephrolepidina*) *plicomargo* sp. n. N. Borodino Isl., HANZAWA 180.

†*Liebusella pozonensis* sp. n. (p. 9 figs.), *L. p. var. n. crassa* (p. 10 figs.) Oligocene-Miocene Venezuela, CUSHMAN & RENZ 94.

†*Lingulina terquemii* nom. n. for *Fronicularia rhomboidalis* Terq. Lower Lias Dorset, MACFADYEN 278 p. 53 figs.—†*L. grimsdalei* sp. n. (p. 14 fig.), Oligocene Venezuela, CUSHMAN & RENZ 94.

†*Loxostoma etigoense* sp. n. (p. 86 fig.) Pliocene Japan, OINOMIKADO 336.

†*Marginulina cyprina* sp. n. (p. 625 figs.) Cretaceous Texas, VIEAUX 471.—†*M. basispinosa* sp. n. (p. 13 figs.), *M. superba* sp. n. (p. 14 figs.) Miocene Venezuela, CUSHMAN & RENZ 94.

†*Marginulinopsis wilcozensis* sp. n. (p. 582 figs.) Eocene Alabama, TOULMIN 454.

†*Marsipella ? torta* sp. n. (p. 370 fig.) Silurian U.S.A., STEWART & PRIDDY 429.

†*Miogypsinella* gen. n. *borodinensis* sp. n. N. Borodino Island, HANZAWA 180.

†*Miogypsinoides dehaarti* var. n. *pustulosa*, *M. bantamensis* [sp. n. ?] *M. lateralis* sp. n. N. Borodino Isl., HANZAWA 180.

†*Miogypsinopsis* gen. n. [sp. not mentioned] N. Borodino Isl., HANZAWA 180.

†*Nodosaria harrisi* sp. n. (p. 625 fig.), *N. barkeri* sp. n. (p. 626 fig.) Cretaceous Texas, VIEAUX 471.—†*N. stainforthi* sp. n. (p. 15 fig.) Oligocene-Miocene Venezuela, CUSHMAN & RENZ 94.

†*Oolitella* gen. n. *irregularis* sp. n. (p. 243 figs.) Pleistocene Japan, MAKIYAMA & NAKAGAWA 286.

†*Palmula mcglameryae* sp. n. (p. 592 figs.) Eocene Alabama TOULMIN 454.

†*Parafusulina shiptoni* sp. n. Permian Karakoram, DUNBAR 112 p. 1 fig.

†*Parrella expansa* sp. n. (p. 604 figs.) Eocene Alabama, TOULMIN 454.

†*Pellatispira madaraszii* var. n. *indica* (p. 13), *P. inflata* var. n. *minor* (p. 15) Eocene W. India, NARAYANA RAO 327.

†*Planularia arbenzi* sp. n. (p. 13 fig.) Oligocene-Miocene Venezuela, CUSHMAN & RENZ 94.

Planulinoides gen. n. *biconcavus* (nom. n. for *Discorbina biconcava* J. & P.) S. Australia, PARR 346.

†*Polymorphinella elongata* sp. n., *P. subcompressa* sp. n. (p. 596 figs.) Eocene Alabama, TOULMIN 454.

†*Psammosphaera subsphaerica* sp. n. (p. 371 fig.) Silurian U.S.A., STEWART & PRIDDY 429.

†*Pseudofusulina uralica* var. n. *firma*, *P. exuberata* sp. n., *P. differta* sp. n. Ishimbayev Russia, SHAMOV 413.

†*Pseudoglandulina gallowayi* var. n. *paucicostata* (p. 16 fig.) Miocene Venezuela, CUSHMAN & RENZ 94.

†*Pseudoschwagerina samegaiensis* sp. n. (p. 96 figs.) Japan, HUZIMOTO 214.—†*P. portentosa* sp. n. Ishimbayev Russia, SHAMOV 413.

†*Pulvinulinella jarvisi* sp. n. (p. 24 fig.) Miocene Venezuela, CUSHMAN & RENZ 94.

Quinqueloculina pseudoreticulata sp. n. S. Australia, PARR 346.

†*Raibosammina irregularis* sp. n. (p. 372 fig.) Silurian U.S.A., STEWART & PRIDDY 429.

†*Reophax eckernex* sp. n. (p. 625 fig.) Cretaceous Texas, VIEAUX 471.—†*R. woodbinensis* sp. n. (p. 359 figs.) Cretaceous Texas, TAPPAN 443.

†*Rhabdimmina geniculata* sp. n., *R. minuta* sp. n., *R. triradiata* sp. n. (p. 369 figs.) Silurian U.S.A., STEWART & PRIDDY 429.

†*Robulus knighti* sp. n., *R. magnificus* sp. n. (p. 578 figs.) Eocene Alabama, TOULMIN 454.—†*R. suteri* sp. n. (p. 10 figs.), *R. hedbergi* sp. n. (p. 10 fig.), *R. nuttalli* sp. n. (p. 11 fig.), *R. n. var. n. obliquicostata* (p. 11 fig.), *R. melvilli* sp. n. (p. 12 fig.), *R. senni* sp. n. (p. 12 figs.) Oligocene-Miocene Venezuela, CUSHMAN & RENZ 94.

†*Saccammina aspera* sp. n. (p. 372 fig.) Silurian U.S.A., STEWART & PRIDDY 429.

†*Siphogenerina senni* sp. n. (p. 22 figs.), *S. kugleri* sp. n. (p. 22 fig.) Oligocene-Miocene Venezuela, CUSHMAN & RENZ 94.

†*Siphonides* gen. n. *biserialis* sp. n. (p. 174 figs.) Eocene Texas, FERAY 132.

†*Siphonina pozonensis* sp. n. (p. 24 fig.) Oligocene-Miocene Venezuela, CUSHMAN & RENZ 94.

†*Sorosphaera osgoodensis* sp. n. (p. 371 fig.) Silurian U.S.A., STEWART & PRIDDY 429.

†*Sphaeroidinella rutschi* sp. n. (p. 25 fig.) Miocene Venezuela, CUSHMAN & RENZ 94.

Streblus pauperatus sp. n. S. Australia, PARR 346.

†*Textularia leuzingeri* sp. n. (p. 3 fig.), *T. falconensis* sp. n. (p. 3 fig.), *T. lalickeri* sp. n. (p. 3 figs.), *T. pozonensis* sp. n. (p. 4 fig.), *T. isidroensis*, sp. n. (p. 4 fig.), *T. kugleri* sp. n. (p. 5 figs.) Oligocene-Miocene Venezuela, CUSHMAN & RENZ 94.—†*T. cuyleri* sp. n. (p. 147 figs.), *T. gertrudeana* sp. n. (p. 148 figs.), *T. hannai* sp. n. (p. 149 figs.), *T. isabelensis* sp. n. (p. 149 figs.), *T. israelskyi* sp. n. (p. 150 figs.), *T. mississippiensis* var. n. *crockettensis* (p. 150 figs.), *T. m.* var. n. *elongata* (p. 151 figs.), *T. stapperi* sp. n. (p. 152 figs.) Tertiary Texas, DAVIS 102.

†*Textulariella miocenica* var. n. *brevis* (p. 9 fig.) Oligocene-Miocene Venezuela, CUSHMAN & RENZ 94.

†*Thurammina crescentrica* sp. n. (p. 373 fig.) Silurian U.S.A., STEWART & PRIDDY 429.

†*Tristix* gen. n. *liasina* (nom. n. for *Rhabdogonium liasinum* Bert.) Lower Lias Dorset, MacFADYEN 278 p. 54 figs.

†*Trochammina prima* sp. n. (p. 375 figs.), Silurian U.S.A., STEWART & PRIDDY 429.—†*T. pulvillus* sp. n. (p. 308 figs.) Permian Australia, CRESPIN & PARR 78.

†*Uvigerina juncea* sp. n., *U. rutila* sp. n. (p. 78 figs.) Pliocene, CUSHMAN & TODD 97.—†*U. isidroensis* sp. n. (p. 20 fig.), *U. aueriana* var. n. *attenuata* (p. 21 fig.), *U. gallowayi* var. n. *basicordata* (p. 21 fig.) Oligocene-Miocene Venezuela, CUSHMAN & RENZ 94.

†*Vaginulinopsis exquisita* sp. n. (p. 583 fig.) Eocene Alabama, TOULMIN 454.

†*Valvulina flexilis* sp. n. (p. 7 figs.), Oligocene-Miocene Venezuela, CUSHMAN & RENZ 94.

†*Valvulina jacuraensis* sp. n. (p. 5 fig.) Oligocene-Miocene Venezuela, CUSHMAN & RENZ 94.

†*Valvulineria inaequalis* var. n. *lobata* (p. 23 fig.) Miocene Venezuela, CUSHMAN & RENZ 94.

(d) Heliozoa.

[Vacant.]

(e) Radiolaria.

[Vacant.]

3.—MASTIGOPHORA.

List of Flagellates from Lake Balaton, SZABADOS 431.

Freshwater flagellates from Hungary, SZABADOS 432.

List of colourless (apochlorotic) flagellates, PRINGSHEIM 363.

A. PHYTOMASTIGINA.

(a) Chrysomonadina.

[Vacant.]

(b) Cryptomonadina.

[Vacant.]

(c) Dinoflagellata.

Dinophysiales from S. Atlantic, KÄSLER 236.

Diplopsalis torta sp. n. (p. 122 figs.) Shimoda Bay, Japan, ABÉ 6.

Diplopsalopsis globula comb. n. (p. 132 figs.) for *D. asymmetrica* var. *spherica* Mang.; *D. steinii* sp. n. (p. 137 figs.), *D. orbicularis* var. n. *ovata* (p. 143 figs.) Shimoda Bay, Japan, ABÉ 6.

Dissodium gen. n. *parvum* sp. n. (p. 129 figs.) Shimoda Bay, Japan, ABÉ 6.

Lebouraia minuta sp. n. (p. 126 figs.) Shimoda Bay, Japan, ABÉ 6.

(d) Euglenoidida.

[Vacant.]

(e) Phytomonadida.

Chlamydomonas: systematic description of spp., with keys, GERLOFF, 166.—*C. moewusii* sp. n., *C. debaryana* f. n. pluristigma, *C. d.* var. n. micro-papillata, *C. terricola* sp. n., *C. humophilos* sp. n., *C. media* var. n. eustigma, *C. pseudogloeogama* sp. n., *C. typhlos* sp. n., *C. concinna* sp. n., *C. peterfi* comb. n. for *P. pascheri* Pet. 1939, *C. parvula* sp. n., *C. sestinensis* sp. n., *C. mutabilis* sp. n., *C. mundana* comb. n. for *C. paradoxa* Pasch., *C. heterogama* sp. n., GERLOFF 166 pp. 319-417 figs.

B. ZOOMASTIGINA.

(f) Protomonadida.

Bicoeca maris sp. n. (p. 466 fig.); *B. lacustris* divided into *B. l.* and *B. vacillans* Stöle; affinities of the Bicoecidae, PICKEN, 357.

☞ *Chilomastix navasi* sp. n. (p. 45 fig.) from tapir, Brazil, FONSECA 137.

Crithidia penicillidiae sp. n. from Nycteribiid fly, *Penicillidia pachymella* (probably stages of bat-trypanosome in the fly), REICHENOW 371 p. 267 figs.

Devescovinidae, revision of family and record of Indian forms, MELLO 309.

Eutrichomastix bertholdi sp. n. (p. 47 fig.) from tapir, Brazil, FONSECA 137.

Pentatrachomastix eutamias sp. n. from ground-squirrel *Eutamias asiaticus* Japan, TANABE & OKINAMI 440 p. 130 figs.

Pentatrachomonas eutamias sp. n. from ground-squirrel *Eutamias asiaticus* Japan, TANABE & OKINAMI 440 p. 129 figs.

Phytomonas tirucalli sp. n., from milkweed, *Euphorbia tirucalli*, E. Africa, REICHENOW 371 p. 282 figs.

Trichomonas tapiri sp. n. (p. 45 figs.) from tapir, Brazil, FONSECA, 137.—*T. hoplodactyli* sp. n. from gecko, *Hoplodactylus maculatus*, New Zealand, PERCIVAL 352 p. 373 figs.

Trichomonas v. *Pentatrachomonas*.

Trypanosoma sigmodoni sp. n. from rat, *Sigmodon hispidus*, Florida, CULBERTSON 81 p. 45.—*T. knowlesi* sp. n. from Indian bird, *Uroloncha malabarica*, DAS GUPTA & SIDDONS

100 p. 151 figs.—*T. fulicae* sp. n. from Indian bird, *Fulica atra*, FONSECA 138 p. 315 fig.—*T. mpapuensis* sp. n. from bat, *Nycteris aethiopica*, E. Africa, REICHENOW 371 p. 274 figs.—*T. urolonchae* sp. n. from bird, *Uroloncha striata*, India, PEREIRA 354.

(g) Hypermastigida.

[Vacant.]

(h) Diplomonadida.

Hexamita eutamias sp. n. from ground-squirrel *Eutamias asiaticus* Japan, TANABE & OKINAMI 440 p. 131 figs.—*H. meleagridis* sp. n. from turkey; also host-parasite list for *H.* spp., McNEIL, HINSHAW & KOFOID 280 p. 71 figs.

(i) Polymonadida.

[Vacant.]

4.—SPOROZOA.

A. COCCIDIOMORPHA.

(a) Gregarinida.

Actinocephalus elongatus sp. n. from Orthoptera, *Chortophaga*, *Arphia*, *Schistocerca*, *Melanoplus*, *Dichromorpha*, SEMANS 407 pp. 457-464.

Gregarina paracoblattae sp. n. *G. thomasi* sp. n. from *Paracoblatta* spp.; *G. prima* sp. n., *G. ceuthophili* sp. n., *G. proteocephala* sp. n. from *Ceuthophilus*; *G. hadenoeci* sp. n. from *Hadenocercus*; *G. rigida columna* subsp. n. from *Melanoplus* spp., *Spharagemon* spp., *Dissosteira*, *Pardalophora*, *Encoptolophus*, *Chortophaga*, *Arphia*; *G. ohioensis* sp. n. from *Paracoblatta*; *G. indianensis* sp. n. from *Melanoplus* spp., *Chorthippus*; *G. acrydiinarum* sp. n. from *Acrydium*, *Paratettix* (Orthoptera) U.S.A., SEMAN 407 pp. 457-464.

Pileocephalus tachycines sp. n. from Orthopteron, *Tachycines* U.S.A., SEMANS 407 p. 457.

Stylocephalus bahli sp. n. from Indian beetle *Gonocephalum*; with differential diagnoses of other spp. of *Stylocephalus*, MISRA 311 p. 43 figs.

(b) Coccidiida.

Eimeria alabamensis, *E. subspherica* spp. n. (with key to other spp.) from cattle, U.S.A., CHRISTENSEN 66 pp. 212, 214.

Globidium regarded as subgenus of *Eimeria*, with spp.: *E. (G.) leuckarti*, *E. (G.) cameli*, *E. (G.) gilruthi*, etc., REICHENOW 373.

Haemogregarina lermensis sp. n. from snake *Thamnophis marostemma* Mexico, MARTINEZ 294 p. 101 figs.

(c) Haemosporidia.

Babesia ardeae sp. n. from heron, *Ardea cinerea* Indochina, TOUMANOFF 455 p. 491 figs.

Haemoproteus fulicae sp. n. from Indian bird, *Fulica atra*, FONSECA 138 p. 315 figs.; *H. coraciae* sp. n. from Indian bird, *Coracias indica*, VALLES 463 p. 309 figs.

Plasmodium juxtannucleare sp. n. from fowl, Brazil, VERSIANI & GOMES 469 p. 231.—*P. durae* sp. n. from domestic turkey, Kenya, HERMAN 198 p. 22 figs.—*P. praecox* var. n. *muniae* from Indian bird, *Munia atricapilla*, DAS GUPTA & SIDONS 99 p. 148 figs.

Theileria parva, life-cycle in cattle and in ticks, REICHENOW 370.

B. CNIDOSPORIDIA.

(d) Myxosporidia.

Myxosporidia: list of spp. found in fishes from California coast, NOBLE 331.

Chloromyxum gibbosum sp. n. from N. American fish, *Eupomotis gibbosus*, HERRICK 200 p. 163.

Henneguya otolithi sp. n. from fish *Otolithus* spp., India, GANAPATI 153.—*H. ohioensis* sp. n. from *Eupomotis gibbosus* (Pisces), *H. rupestris* sp. n. from *Ambloplites rupestris* (Pisces) N. America, HERRICK 200 p. 163.

Myxobolus gibbosus sp. n. from N. American fish, *Eupomotis gibbosus*, HERRICK 200 p. 163.

Sphaeromyxa lateralis sp. n. from fish *Artemis lateralis* California coast, NOBLE 331 p. 409 figs.

(e) Microsporidia.

Glugea hertwigi var. n. *canadensis* from smelt, *Osmerus mordax*, Canada, FANTHAM etc. 119 p. 192 figs.

Gurleya aeschnae sp. n. from larvae of dragonfly, *Aeschna grandis*, Canada, FANTHAM etc. 119 p. 197 figs.

Nosema pimephales sp. n. from fish, *Pimephales promelas*, Canada, FANTHAM etc. 119 p. 188 figs.

Perezia aeschnae sp. n. from larvae of dragonfly, *Aeschna grandis*, Canada, FANTHAM etc. 119 p. 195 figs.

(f) Actinomyxidina.

Sphaeractinomyxon ilyodrili sp. n. from oligochaete, JIROVEC 228.

(g) Sarcosporidia.

Sarcosporidia: systematic position and subdivisions, BARRETTO 24.

Sarcocystis eutamias sp. n. from ground squirrel *Eutamias asiaticus* Japan, TANABE & OKINAMI 440 p. 127 figs.—*S. jacarinae* sp. n. from S. American bird, *Volatinia jacarina*, BARRETTO 24 p. 339 figs.

(h) Haplosporidia.

Haplosporidium aulodrili sp. n. from oligochaete *Aulodrilus*, JIROVEC 227.

5.—CILIOPHORA.

A. OPALINATA.

[Vacant.]

B. CILIATA.

(a) Holotrichida.

Amphileptus medius sp. n. (p. 14 fig.) China, WANG 475.

Balantiophorus, systematic position and affinities of genus, with revised description of *B. minutus* Schew., WATSON 476.

Colpoda: revision of species, BURT 54.

Dileptus dimorphus sp. n. (p. 18 fig.) China, WANG 475.

Glaucoma elliptica sp. n. (p. 23 fig.), China, WANG 475.

Lionotus (Hemiophrys) lineatus sp. n. (p. 16 fig.) China, WANG 475.

Nassula gigantea sp. n. from Tortugas, BULLINGTON 53 p. 184 fig.

Ophryoglena frontonia sp. n. from Tortugas, BULLINGTON 53 p. 187 figs.

Prorodon microstomium sp. n. (p. 11 fig.) China, WANG 475.

Pseuduronema gen. n. [nom. n. for *Uronema marina* (pro parte), *U. schewiakoffi* & *U. ovale*], HOARE 1927 p. 185 (omitted from Z. R. lxiv 1928 319).

Tetrahymena gen. n. *geleii* sp. n. (incorporating various spp. of *Glaucoma-Colpidium* group), FERGASON 148.

Trachelocerca dracontoides sp. n. from Tortugas, BULLINGTON 53 p. 197 figs.

(b) Heterotrichida.

Blepharisma sinuosum sp. n. from Brazil, with key to spp. of *Blepharisma*, SAWAYA 395 p. 303 figs.

Condylostoma granulorum sp. n. (p. 191 fig.), *C. minutum* sp. n. (p. 193 fig.) from Tortugas, BULLINGTON 53.

Nyctotherus sokoloffi sp. n. (p. 165 fig.) from lizard, *Amphisbaena albocingulata* Paraguay, SCHOUTEN 400.—*N. ovalis* var. n. [unnamed] from Orthopteron, *Parcoblatta pensylvanica*, U.S.A., SEMANS 407 p. 457.

Odontostomata subordo n. (nom. n. for *Ctenostomata* Kahl, 1932: preoccupied in Polyzoa), SAWAYA 395.

Peritromus tortugensis sp. n. from Tortugas, BULLINGTON 53 p. 195 fig.

(c) Oligotrichida.

Strombidium alveolare sp. n. from Tortugas, BULLINGTON 53 p. 205 figs.

(d) Entodiniomorpha.

[Vacant.]

(e) Hypotrichida.

Epiclintes caudatus sp. n. from Tortugas, BULLINGTON 53 p. 206 fig.

Gastrocirrhus stentoreus sp. n. from Tortugas, BULLINGTON 53 p. 218 fig.

Strongylidium crepidatum sp. n. (p. 25 fig.) China, WANG 475.

Uncinata gen. n. *gigantea* sp. n. from Tortugas, BULLINGTON 53 p. 207 figs.

Urostyla pseudomuscorum sp. n. (p. 28 fig.) China, WANG 475.

(f) Peritrichida.

Cothurnia sp. n. ? Hungary, STILLER 430 p. 252 fig.

Lagenophrys lunatus sp. n. ectoparasitic on crustacean *Leander paucidens* Japan, IMAMURA 216 p. 267 figs.

Pyxicola limbata sp. n. Hungary, STILLER 430 p. 251 fig.

Vorticella lutea sp. n. (p. 249 fig.), *V. incisa* sp. n. (p. 250 fig.), Hungary, STILLER 430.

C. SUCTORIA.

[Vacant.]

PROTISTA INCERTAE SEDIS.

[?] "Protozoal" organisms found in human organs, BONNE & PRAWIROHARDJO, 41.

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3. PORIFERA

BY

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†*Receptaculites pedunculatus* sp. n. Silurian U.S.A., TWENHOFEL Trans. Wisc. Acad. Sci. Arts. Lett. 31 1938 p. 545 figs. 1-2.

†*Rhaxella perforata*, HEMINGWAY 6.

†*Zittellella clarae* sp. n. Ordovician U.S.A., HOWELL Bull. Wagner Free Inst. Philad. 16 (1) 1941 p. 1 pl.

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(iv) LITHISTIDA.

†*Hindia cylindrica* sp. n. Silurian U.S.A., HOWELL Bull. Wagner Free Inst. Philad. 15 (4) 1940 p. 48 figs. 1-5.

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†*Archaeocyathacea* general, SIMON 19.

†*Annulocyathus* gen. n., *pulcher* p. 64 pl. xiv figs. 1-3 text-fig. 44 sp. n. Cambrian U.S.S.R., VOLOGDIN Sci. & Geol. Prosp. Inst. 1 1940.

†*Archaeocyathellus* (*Protocyathus*) *arcuatus* p. 73 pl. iv fig. 6, *cordobae* p. 74 pl. ii figs. 11-12, pl. iv figs. 9-10, pl. v fig. 6, *eremitae* p. 74 pl. iii figs. 1-13 spp. n. Cambrian Spain, SIMON Abh. Senckenb. naturf. Ges. 448 1939.

†*Archaeocyathus anabarensis* p. 51 pl. i, fig. 1b, pl. ii figs. 1a, 3, pl. iii fig. 4a, pl. iv figs. 4b, 4c, 5a, 5b, pl. v fig. 4a; *tkatschenkovi* p. 51 pl. i fig. 1b, 4, pl. iii fig. 1b, pl. iv fig. 2a, pl. vi figs. 1, 2, 5a; *tenuimurus* p. 52 pl. vi fig. 7; *robustus* p. 53, *moori* p. 53, pl. iii fig. 1a, pl. iv figs. 2c, 3b, pl. v fig. 1a, pl. vi fig. 4a spp. n. Cambrian U.S.S.R., VOLOGDIN Trans. arctic Inst. Lenin-grad 91 1937; *A. artus* p. 54 pl. viii fig. 15, *neocactus* p. 57 pl. ix fig. 6, *grandis* p. 57 pl. ix fig. 8, *speranski* p. 57 pl. ix fig. 9, *voinovae* p. 58 pl. x fig. 4, *immanis* p. 59 pl. xi fig. 4, *gorskinensis* p. 59 pl. xi fig. 5, *uricus* p. 59 pl. xi fig. 6, *facilis* p. 59 pl. xi fig. 7, spp. n. Cambrian U.S.S.R., VOLOGDIN Sci. & Geol. Prosp. Inst. 1 1940; *A. pachecoi* sp. n. Cambrian Spain, MELÉNDEZ Bol. Soc. esp. Hist. Nat. 39 (5-6) 1941 p. 235 pl. xvii fig. 2, 2a, A, B, 3, 3a.

†*Asterocyathus* gen. n. p. 92, *latus* p. 92 pl. xxix figs. 3-4, *longus* p. 92 pl. xxix fig. 5, *dentatus* p. 92 pl. xxix fig. 7, text-fig. 81B, *salairicus* p. 92 pl. xxix figs. 6, 8-9, *densus* p. 93 pl. xxix fig. 10 spp. n. Cambrian U.S.S.R., VOLOGDIN Sci. & Geol. Prosp. Inst. 1 1940.

†*Bačatocyathus* gen. n. p. 95, *compositus* p. 96 pl. xxx fig. 11, *kazakevici* (type) p. 96 pl. xxx fig. 12 spp. n. Cambrian U.S.S.R., VOLOGDIN Sci. & Geol. Prosp. Inst. 1 1940.

†*Beticocyathus* gen. n., type=*beticus* sp. n. Cambrian Spain, SIMON Abh. Senckenb. naturf. Ges. 448 1939 p. 73 pl. iv figs. 7-8.

†*Bicyathus cylindricus* sp. n. Cambrian U.S.S.R., VOLOGDIN Sci. & Geol. Prosp. Inst. 1 1940 p. 51 pl. vii fig. 15.

†*Carinacyathus bagenovi* sp. n. Cambrian U.S.S.R., VOLOGDIN Sci. & Geol. Prosp. Inst. 1 1940 p. 90 pl. xxviii figs. 1-2 text-fig. 78B.

†*Clathrocyathus parvulus* sp. n. Cambrian U.S.S.R., VOLOGDIN Sci. & Geol. Prosp. Inst. 1 1940 p. 76 pl. xx figs. 6-7.

†*Coelocyathus kidrjassoviensis* sp. n. Cambrian U.S.S.R., VOLOGDIN Sci. & Geol. Prosp. Inst. 1 1940 p. 51 pl. vii figs. 7-9 text-fig. 24.

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†*Ethmocoscinus* gen. n., type=*Coscinocyathus papillipora* Bedford, SIMON

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†*Ethmophyllum simplex* sp. n. Cambrian U.S.S.R., VOLOGDIN Trans. arctic Inst. Leningrad 91 1937 p. 54 pl. iii fig. 2, pl. iv fig. 3a; *E. macphersoni* sp. n. Cambrian Spain, SIMON Abh. Senckenb. naturf. Ges. 448 1939 p. 78 pl. ii fig. 10; *E. crassispinosum* p. 65 pl. x fig. 7, *flexum* p. 66 pl. xv fig. 4, text-fig. 46, *diploperforatum* p. 66 pl. xv fig. 5 text-fig. 47, *poletaevae* p. 68 pl. xvi figs. 3-5, *abakanensis* p. 69 pl. xvi figs. 7-9 text-fig. 49 spp. n. Cambrian U.S.S.R., VOLOGDIN Sci. & Geol. Prosp. Inst. 1 1940.

†*Formosocyathus bulynnikovi* sp. n. Cambrian U.S.S.R., VOLOGDIN Sci. & Geol. Prosp. Inst. 1 1940 p. 90 pl. xxviii figs 3-4.

†*Leptocyathus uricus* sp. n. Cambrian U.S.S.R., VOLOGDIN Sci. & Geol. Prosp. Inst. 1 1940 p. 65 pl. xiv fig. 7.

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†*Orbicyathus vinkmani* sp. n. Cambrian U.S.S.R., VOLOGDIN Sci. & Geol. Prosp. Inst. 1 1940 p. 71 pl. xviii fig. 4.

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†*Sajanocyathus ussori* sp. n. Cambrian U.S.S.R., VOLOGDIN Sci. & Geol. Prosp. Inst. 1 1940 p. 81 pl. xxii figs. 6-8 text-figs. 66-67B.

†*Salairocyathus* gen. n. p. 89, *zenkovae* sp. n. Cambrian U.S.S.R., VOLOGDIN Sci. & Geol. Prosp. Inst. 1 1940 p. 89 pl. xxvi fig. 6.

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†*Yakovlevia angusta* **sp. n.** Cambrian U.S.S.R., VOLOGDIN Sci. & Geol. Prosp. Inst. **1** 1940 p. 97 pl. xxxi figs. 6-7.

4. COELENTERATA

ARRANGED BY

H. DIGHTON THOMAS, M.A., PH.D.

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†*Actinostromaria taurica*, *yvonneiae*, *andrussovi*, *varuma*, *péelinzevi*, *peculiaris*, *vogdti*, *pavloviae*, **spp. n.** NOMM. NUD. p. 380 Upper Jurassic Russia, YAVORSKY C.R. Acad. Sci. Moscou N.S. 28 4 1940.

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†*Brooksella canyonensis* **sp. n.** p. 522 fig. Pre-Cambrian Arizona U.S.A., BASSLER Proc. U.S. Nat. Mus. 89 1941.

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†*Krimestroma borissiakii* **sp. n.** NOM. NUD. p. 380 Upper Jurassic Russia, YAVORSKY C.R. Acad. Sci. Moscou N.S. 28 4 1940.

†*Labechiella* **gen. n.**, genotype (by author's designation) *regularis* **sp. n.** Japan, SUGIYAMA Jubilee Publ. Comm. 60th Birthday Prof. H. Yabe 1 1939 [non vidi].

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†*Syringostroma centrotum* var. *kirgisicum* var. n. NOM. NUD. p. 380 Upper Silurian Russia, YAVORSKY C.R. Acad. Sci. Moscou N.S. 28 4 1940.

†*Tauripora astroites* sp. n. NOM. NUD. p. 380 Upper Jurassic Russia, YAVORSKY C.R. Acad. Sci. Moscou N.S. 28 4 1940.

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†*Disphyllum gemmiforme* p. 259 fig., HILL 36.—*D. nevadense* sp. n. p. 63 fig. Upper Devonian Nevada, STUMM J. Paleont. Menasha Wis. 14 1 1940.

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†*Polycoelia baytuganensis* sp. n. p. 54 fig. U.S.S.R., SOSHKINA Atlas of the Leading Forms of the Fossil Fauna U.S.S.R. 6 Permian 1939.

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5. ECHINODERMA

ARRANGED BY

A. G. BRIGHTON, M.A.

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†*Hemiaster* cf. *regulusi* pp. 132, 157, 178, sp. ind. A pp. 130, 155, 176 fig. 21, pl. iii fig. 8, sp. ind. B pp. 131, 156, 177 fig. 22, pl. iii fig. 9, ROUCHADZÉ 64.

†*Isomicraster faasi* sp. n. Cretaceous Georgia, ROUCHADZÉ Bull. Mus. Géorgie, Tiflis 10A 1940 pp. 124-125, 153, 173 figs. 16-17, pl. iii figs. 4a-c.

†*Lovenechinus hunanensis* sp. n. Carboniferous China, OZAKI Jubilee Publ. Commem. Yabe 60th Birthday 1 1939 pp. 563-567 1 pl.

Mellita sexiesperforata, BERNASCONI 6 p. 106 fig.

†*Mellita quinquesperforata*, BERRY 10 p. 443 pl. lxv fig. 5.

†*Melonechinus dispar*, YAKOVLEV 79 p. 68 pl. xiii figs. 27-28.

†*Micraster* cf. *aturicus* pp. 122, 152, 172, aff. *breviporus* pp. 117, 150, 171 fig. 11, pl. ii fig. 7, cf. *schroederi* pp. 122, 152, 173; *schroederi* var. *haasi* pp. 122, 152, 173 fig. 15, pl. ii fig. 8; *M. sp. ind. A* pp. 118, 151, 171 fig. 12, pl. iii fig. 1, sp. ind. B pp. 119, 151, 171 fig. 13, pl. iii fig. 2, sp. ind. C. pp. 121, 152, 172 fig. 14, pl. iii fig. 3, ROUCHADZÉ 64.

†*Microsoma speciosum*, COOKE 21 p. 12 pl. iii figs. 1-4.

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†*Oligopygus nancei* sp. n. Eocene Venezuela, COOKE J. Paleont. Menasha, Wis. 15 pp. 305-306 figs. 1-3.

†*Ovulaster zignoi*, ROUCHADZÉ 64 pp. 113, 149, 170 pl. ii fig. 6.

†*Phyllacanthus mortoni*, COOKE 21 p. 3 pl. i figs. 16-18.

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†*Phymotaxis mansfieldi* sp. n. Paleogene U.S.A., COOKE J. Paleont. Menasha, Wis. 15 p. 18 pl. iii figs. 12-13, pl. iv figs. 6-8.

†*Physaster* cf. *abichi*, ROUCHADZÉ 64 pp. 112, 149, 170.

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†*Pseudooffaster caucasicus*, ROUCHADZÉ 64 pp. 93, 142, 163.

†*Seunaster georgicus* sp. n. with var. *lata* var. n. pp. 95-97, 143, 164 figs. 4a-d, pl. i figs. 2a-e; *lazicus* sp. n. pp. 97-98,

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†*Spatangoides striato-radiatus*, ROUCHADZÉ 64 pp. 91, 142, 163.

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†*Wachsmuthicrinus ponderosus*, WRIGHT 78 p. 58.

†*Woodocrinus* cf. *expansus* p. 35 pl. i figs. 3, 5, *gravis* p. 33 figs. 36-40, pl. iii figs. 1-2, 4-9, pl. vi fig. 11, *biddesdalensis* p. 31 pl. i figs. 1-2, pl. iii fig. 3, pl. vi fig. 10, pl. vii fig. 8, *whytei* p. 34 pl. i fig. 4, pl. xii fig. 23, WRIGHT 78.

†*Wrightocrinus* gen. n. for type *Allagocrinus jaklovlevi* Wanner 1929 Permian Timor, MOORE J. sci. Labs. Denison Univ. 35 1940 p. 92 figs. 1g-h.

†*Xenocatillocrinus*, discussion, MOORE 57 p. 90.

†*Zeacrinus konincki*, WRIGHT 78 p. 27 fig. 18, pl. v. figs. 2-3, 5.—*Z. polaris*, YAKOVLEV 80 p. 60 pl. x fig. 5.

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†Impressions of crinoid stem swept along sea floor, OKULITCH & TOVELL 61 p. 89 fig. 1.

†[Group] *Ellipsellipsopa* sp., OAKLEY 60 p. 11.

MACHAERIDIA.

[Vacant.]

†CYSTIDEA AND EDRIOASTEROIDEA.

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Hexaporites, probably a Cystid, LANG, SMITH & THOMAS 51 p. 70.

Protocrinites fragum, YAKOVLEV 82 p. 857 fig.

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Sagittoblastus wanneri sp. n. Permian U.S.S.R., YAKOVLEV Atlas leading forms fossil fauna U.S.S.R. 6 1939 p. 63 fig. 17, pl. x fig. 14.

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†*Cymbionites* gen. n. for type *C. craticula* sp. n. Cambrian Australia, WHITEHOUSE Mem. Qd. Mus. Brisbane 12 pp. 9-10 figs. 4-6, pl. i figs. 1, 3, pl. ii figs. 10-24, pls. iii-iv. [For this genus are erected the Family Cymbionitidae nov., and the class Cycloidea nov.]

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Autolytus simplex Ehl., Enderby land, MONRO Rpt. B.A.N.Z. Antarctic Res. Exped. **4B** iv 1939 p. 114 fig. 8.—*A. bidens* sp. n. Bermuda, TREADWELL Zoologica New York **26** 1941 p. 28 fig. 9.

Chaetozone setosa Malmgr., Heard Island, MONRO Rpt. B.A.N.Z. Antarctic Res. Exped. **4B** iv 1939 p. 128 fig. 17.—*C. spinosa* var. *corona* var. n. southern California, BERKELEY & BERKELEY Bull. S. Calif. Acad. Sc. **40** 1941 p. 45.

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Haploscoloplos cylindrifera (Ehl.), Tasmania, MONRO Rpt. B.A.N.Z. Antarctic Res. Exped. **4B** iv 1939 p. 124 fig. 13.

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pp. 167–169 pl. i figs., *brachyacantha* pp. 169–172 pls. iii, iv, *glandiferum* pp. 172–174 pl. iv spp. n. Mexico, RIOJA An. Inst. Biol. Mexico **12** 1941.

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[Conodonta, Scolecodonta etc.]

†*Bactrognathus* gen. n. *hamata* sp. n. limestone, Missouri p. 98, *angulata*, *distorta*, *excavata* p. 99, *inornata* p. 100 figs. spp. n. Carboniferous, N. America, BRANSON & MEHL J. Paleont. Menasha 15 1941.

†*Cavusgnathus cristata* sp. n. Upper Mississippian Oklahoma, BRANSON & MEHL J. Sci. Labs. Denison Univ. 35 1940 p. 177 figs.—†*C. flexa* sp. n. Pennsylvania, ELLISON J. Paleont. Menasha 15 1941 p. 126 figs.

†*Condolella* spp., mussel chalk, Germany, BRANSON & MEHL J. Sci. Lab. Denison Univ. 35 1940 p. 194 6 figs.—†*C. denuda* p. 121, *symmetrica* p. 122, *costata*, *dubia* p. 124, *lobata*, *neolobata* p. 125, spp. n. Pennsylvania, ELLISON J. Paleont. Menasha 15 1941.

†*Doliognathus* spp. Hartz Mts., Germany, BRANSON & MEHL J. Sci. Labs. Denison Univ. 35 1940 p. 193 pl. vii 2 figs.

†*Doliognathus* gen. n. *lata* p. 100, *dubia*, *excavata* p. 101 spp. n. Carboniferous, N. America, BRANSON & MEHL J. Paleont. Menasha 15 1941.

†*Gnathodus pustulosus* sp. n. *texanus* Roundy p. 172 figs., Upper Mississippian, Oklahoma, *linguiformis* sp. n. Keokuk formation, Missouri, p. 183 figs., BRANSON & MEHL J. Sci. Labs. Denison Univ. 35 1940.

†*Hibbardella* Cl. and B. revised def. p. 175, *abnormis* sp. n. Keokuk formation, Missouri, p. 184 pl. vi, BRANSON & MEHL J. Sci. Labs. Denison Univ. 35 1940.

†*Hindeodella undata* sp. n. Caney Shale, Oklahoma, BRANSON & MEHL J. Sci. Labs. Denison Univ. 35 1940 p. 169 fig.—†*H. pulchra*, *parva* spp. n. Pennsylvania, ELLISON J. Paleont. Menasha 15 1941 p. 117 figs.

†*Icriodus* sp. nr. *curvatus* B. and M., Devonian, Germany, BRANSON & MEHL J. Sci. Labs. Denison Univ. 35 1940 p. 192 pl. vii 4 figs.

†*Idiognathoides* Harris and Hollingsworth 1933 syn. of *Polygnathodella* Harlton, BRANSON & MEHL J. Paleont. Menasha 15 1941 p. 103.

†*Idiognathodus tersus* p. 134, *acutus* p. 137 spp. n. Pennsylvania, ELLISON J. Paleont. Menasha 15 1941.

†*Ligonodina tenuis* sp. n. Upper Mississippian, Oklahoma, p. 170 figs., *levis* sp. n. St. Louis County, Missouri, p. 185 fig. 10, BRANSON & MEHL J. Sci. Labs. Denison Univ. 35 1940.—†*L. typa* (Gunnell) p. 114, *lexingtonensis* (Gunnell) p. 115 figs., Pennsylvania, ELLISON J. Paleont. Menasha 15 1941.

†*Lonchodina clarki* (Gunnell), *ponderosa* sp. n. Pennsylvania, ELLISON J. Paleont. Menasha 15 1941 p. 116 figs.

†*Metalonchodina* gen. n. p. 105, type *Prioniodus bidentata* Gunnell 1931, BRANSON & MEHL J. Paleont. Menasha 15 1941 p. 106 fig. 34.—†*M. bidentata* (Gunnell) p. 116, *tenora* sp. n. p. 117 figs., Pennsylvania, ELLISON J. Paleont. Menasha 15 1941.

†*Ozarkodina* spp. indet., Keokuk formation, Missouri, p. 184 figs., *mutabilis* sp. n. Caney formation, Upper Mississippian, Oklahoma, BRANSON & MEHL J. Sci. Labs. Denison

Univ. 35 1940 p. 177 fig.—†*O. delicatula* (Stauffer) Pennsylvania, ELLISON J. Paleont. Menasha 15 1941 p. 120 figs.

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†*Polygnathodella* Harlton 1933 *fossata* sp. n., Carboniferous, N. America, BRANSON & MEHL J. Paleont. Menasha 15 1941 p. 103.—†*P. ouachitensis* Harlton, Carboniferous, N. America, BRANSON & MEHL J. Paleont. Menasha 15 1941 p. 106.

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†*Scaliognathus* gen. n. p. 101, *anchoralis* sp. n. p. 102, Carboniferous, N. America, BRANSON & MEHL J. Paleont. Menasha 15 1941.—†*S.* spp., Hartz Mts., Germany, BRANSON & MEHL J. Sci. Labs. Denison Univ. 35, 1940 p. 193 4 figs.

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†*Staurognathus* gen. n. *cruciformis* sp. n. Carboniferous, N. America, BRANSON & MEHL J. Paleont. Menasha 15 1941 p. 102 pl. xix.

†*Streptognathodus oppletus*, *eccentricus* p. 132, *simulator* p. 133 spp. n. Pennsylvania, ELLISON J. Paleont. Menasha 15 1941.

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†*Trichognathus* sp., Keokuk formation, N. America, BRANSON & MEHL J. Sci. Labs. Denison Univ. 35 1940 p. 185 fig.

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7. BRACHIOPODA

BY

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†*Wimanelia* genus discussed pp. 239-241, *aurialis* sp. n. pp. 241-242 pl. xxxiii fig. 6 Cambrian U.S.A. (Montana), *highlandensis* p. 240 pl. xxxiii figs. 23-25, *rossensis* p. 241 pl. xxxiii figs. 1-5, *simplex* p. 242 pl. xxxiii figs. 13-22, BELL J. Paleont. Menasha, Wis. 15 1941.

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†*Orthostrophia dartae*, NORTHROP 42 p. 163 pl. xii figs. 1-2.

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†*Dolerorthis flabellites*, NORTHROP 42 p. 164.

†*Glyptorthis* cf. *fausta*, NORTHROP 42 p. 165.

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WATSELLIDAE.

†*Mendacella challinori* sp. n. pp. 4-8 figs. 2₁₋₄ with var. *inflata* var. n. p. 8 fig. 4 Llandovery (drift) England, *mullockiensis* p. 6 figs. 3₄₋₈ with var. *crassiformis* var. n. pp. 7-8 figs. 3₁₋₃ Llandovery Scotland, LAMONT Cement, Lime & Gravel 15 1940.—*M. uberis*, ? *lenticularis*, NORTHROP 42 p. 165.

†*Parmorthis* p. 165, *elegantula* p. 165, *visbyensis nana* p. 166, NORTHROP 42.

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†*Rhipidomella hybrida*, NORTHROP 42 p. 166.—*R.* ? sp. [1] p. 229 pl. xxxv figs. 1a-b, sp. [2] p. 230 pl. xxxv figs. 2a-c, OZAKI 44.

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†*Enteletella* p. 79, *nikchitchi* p. 79 pl. xvi fig. 4, LICHAREW 34.

†*Enteleles* p. 81, *lamarcki* p. 81 pl. xvi figs. 4a-b, LICHAREW 33.—*E.* p. 78, *tshernyschewi* p. 78 pl. xvi fig. 2, LICHAREW 34.

†*Orthotichia* p. 80, *morganiana* p. 80 pl. xvi figs. 2-3, LICHAREW 33.

†*Schizophoria senecta*, NORTHROP 42 p. 167.

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†*Huenella abnormis*, BELL 4 p. 254 pl. xxxvi figs. 1-3.

†*Metacamerella* p. 399, *balclatchiensis* fig. 17, ST. JOSEPH 50.

†*Syntrophia lateralis*, ST. JOSEPH 50 fig. 1.

†*Syntrophina carinifera*, ST. JOSEPH 50 p. 372 figs. 1-2.

PARASTROPHINIDAE.

Parastrophinidae family discussed, ST. JOSEPH 50 pp. 371-376.

†*Anastrophia* new diagnosis pp. 392-393, *deflexa* p. 395 figs. 13-16, *verneuili* p. 394 fig. 12, ST. JOSEPH 50.

†*Parastrophina* new diagnosis pp. 376-377, *hemicplicata* p. 377 figs. 1-5, *scotfieldi* p. 381 fig. 6, *greeni*, *scotica* p. 384, ST. JOSEPH 50.

†*Parastrophinella* new diagnosis pp. 384-385, *lenticularis* p. 390 fig. 11, *reversa* p. 385 figs. 7-9, *rotunda* p. 389 fig. 10, ST. JOSEPH 50.

PENTAMERACEA.

PENTAMERIDAE.

†*Barrandella kindlei* sp. n. Silurian Canada, NORTHROP Spec. Pap. geol. Soc. Amer. Washington 21 1939 pp. 167-168 pl. xii figs. 3-5.

†*Conchidium knighti*, NORTHROP 42 p. 169.

†*Gypidula dudleyensis* p. 168 pl. xv figs. 1-3, *simplex* p. 168, NORTHROP 42.

†*Pentamerus corrugatus* p. 168, cf. *corrugatus* p. 169, NORTHROP 42.—*P. laevis*, ST. JOSEPH 50 fig. 1.

†*Pentamerus* (*Pentameroides*) cf. *gotlandicus*, ST.-JOSEPH 50 fig. 2.

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†*Stricklandia gaspéensis*, NORTHROP 42 p. 169 pl. xiv figs. 1-6.

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†*Camarophoria* ? *moshihlingensis* sp. n. pp. 248-249 pl. xl figs. 2a-f Carboniferous China (Hunan), *moshihlingensis* var. nov. ? p. 250 pl. xl figs. 3a-c, OZAKI J. Shanghai Sci. Inst. (2) 2 7 1939.—*C.* p. 97, *mutabilis* p. 97 pl. xxiii figs. 3a-d, LICHAREV 33.—*C.* p. 101, *margaritovi* p. 102 pl. xxiv figs. 10-11, *netschajewi* p. 102 pl. xxiv fig. 9, *superstes* p. 102 pl. xxiv fig. 8, LICHAREW 34.—*C. deloi*, STAINBROOK & MADERA 56 p. 378 pl. lv figs. 15-27.

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STROPHOMENIDAE.

†*Aegiria* ? *balclatchiensis*, REED 47 p. 273 pl. v fig. 6.

†*Amphistrophia* p. 176, *alcocki* p. 179 pl. xvi fig. 9, *extensa* p. 178 pl. xvi fig. 14, *insolens* p. 179 pl. xvi figs. 15-16, *perocidens* pp. 179-181 pl. xv figs. 17-19, *varicosta* pp. 178-179 pl. xvi fig. 13, *subeuglypha* pp. 177-178 pl. xvi figs. 10-12 spp. n., *prolongata chaleurensis* var. n. pp. 176-177 pl. xv figs. 4-8 Silurian Canada, NORTHROP Spec. Pap. geol. Soc. Amer. Washington 21 1939.

†*Brachyprion anticostiense* p. 172, *robustum* p. 171, NORTHROP 42.

†*Derbyia magnifica* nom. n. for *D. magna* Licharew 1932 (non *Orthotetes* (*Derbyia*) *magnus* Branson 1930) Permian Russia, LICHAREW Atlas of the leading forms of the fossil faunas [of the] U.S.S.R. vol. 6 1939, p. 80 pl. xvii fig. 1. — *D. arizonensis* nom. n. for *D. regularis* McKee 1938 (non Waagen 1882), Permian U.S.A. (Arizona), MCKEE J. Paleont. Menasha, Wis. 15 1941 p. 91. — *D.* p. 81, *regularis* p. 82 pl. xvi figs. 5-6, LICHAREV 33.

†*Geyerella* p. 80, *tschernyschewi* p. 81 pl. xvii fig. 2, LICHAREW 34.

†*Leptaena rhomboidalis*, NORTHROP 42 p. 171.

†*Leptaenisca foersteri* sp. n. Silurian Canada, NORTHROP Spec. Pap. geol.

Soc. Amer. Washington 21 1939 pp. 182-3 pl. xvi figs. 1-8.

†*Liljevallia* ? *vieillensis* sp. n. Silurian Canada, NORTHROP Spec. Pap. geol. Soc. Amer. Washington 21 1939 p. 174 pl. xv figs. 15-16.

†*Orthotetid* sp., MUIR-WOOD in MUIR-WOOD & OAKLEY 40 p. 11 pl. i fig. 7.

†*Pholidostrophia niagarensis*, NORTHROP 42 p. 175.

†*Pioglyptus* gen. n. p. 172 for type *P. stigmatus* sp. n. pp. 173-174 pl. xiii figs. 1-6 Silurian Canada, NORTHROP Spec. Pap. geol. Soc. Amer. Washington 21 1939.

†*Protomegastrophia profunda*, NORTHROP 42 p. 172.

†*Ptychoglyptus virginienensis* var. *irregularis* var. n. Ordovician Scotland, REED Geol. Mag. London 78 1941 p. 274 pl. v fig. 8.

†*Rafinesquina* cf. *hadelandica*, REED 47 p. 274 pl. v fig. 9.

†*Rhytistrophia* ? *logani* p. 175 pl. xv figs. 20-21, *marcilensis* pp. 174-175 pl. xv fig. 22 Silurian Canada, NORTHROP 42.

†*Schellwienella* ? sp., OZAKI 44 p. 230 pl. xxxv fig. 3.

†*Schuchertella* cf. *applanata*, LAMONT 30 p. 9.—*S. pecten*, NORTHROP 42 p. 181.

†*Sowerbyella transversalis* p. 175 pl. xv figs. 9-10 with var. *brevis* var. n. p. 176 pl. xv figs. 11-14 Silurian Canada, NORTHROP Spec. Pap. geol. Soc. Amer. Washington 21 1939.

Streptorhynchus ? *crenistria*, OZAKI 44 p. 231 pl. xxxv figs. 4a-f.

†*Stropheodontia* ? *arenacea*, LAMONT 30 p. 9 fig. 2.

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†*Chonetella* p. 82, *nasuta* p. 82 pl. xvii figs. 6-7, LICHAREW 34.

†*Chonetes wageri* sp. n. Permian Sikkim, MUIR-WOOD in MUIR-WOOD & OAKLEY Palaeont. indica n.s. 31 1 1941 pp. 12-14 pl. i figs. 8-9.—*C.* evolution discussed, IVANOVA 25 pp. 144-151.—*C.* p. 83, *carbonifera* p. 84 pl. xvii figs. 4-5, *uralica* p. 84 pl. xvii figs. 6-7, LICHAREV 33.—*C. tenuistriatus*, NORTHROP 42 p. 183.—*C. carbonifera*,

OTUKA 43 p. 48 figs. 3a-f.—*C. hardrensis* p. 234 pl. xxxv fig. 7, *papilionacea* p. 233 pl. xxxv figs. 6a-d, pl. xxxvi fig. 1, cf. *semicircularis* p. 232 pl. xxxv fig. 5, OZAKI 44.

†*Chonetes* (*Chonetes*) *carboniferus*, LICHAREW 34 p. 82 pl. xvii fig. 5.

†*Chonetes* (*Paeckelmannia*) *novozemliensis*, LICHAREW 34 p. 81 pl. xvii figs. 3-4.

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†*Avonia* ? cf. *niger*, OZAKI 44 p. 235 pl. xxxv figs. 8a-d.—*Productus* (*A.*) *echidniformis* p. 86 pl. xvii figs. 9-10, *krutoyensis* p. 86 pl. xvii figs. 11a-b, LICHAREW 33.—*A. walcottiana*, STAINBROOK & MADERA 56 p. 377 pl. lv fig. 18.

†*Linoproductus grabaui* sp. n. pp. 246-247 pl. xxxix fig. 4, pl. xl fig. 1 Carboniferous China (Hunan), *striatus* var. *spinifera* p. 245 pl. xxxviii fig. 4, pl. xxxix figs. 3a-b, sp. nov. ? p. 247 pl. xxxix fig. 5, OZAKI J. Shanghai Sci. Inst. (2) 2 7 1939.—*L. cf. cora*, MUIR-WOOD in MUIR-WOOD & OAKLEY 40 p. 17 pl. i figs. 4-6.

†*Marginifera himalayensis*, MUIR-WOOD in MUIR-WOOD & OAKLEY 40 p. 19 pl. i figs. 1-3.—*Productus* (*M.*) p. 93, *capaci* p. 94 pl. xxii figs. 10a-b, *kashiricus* p. 93 pl. xxii figs. 3-4, *schellwieni* p. 94 pl. xxii figs. 11a-c, *timanicus* p. 93 pl. xxii figs. 5-8, *uralicus* p. 94 pl. xxii figs. 9a-c, LICHAREW 33.—*P. (M.) intermedius-helicus* p. 95 pl. xxii fig. 9, *septentrionalis* p. 95 pl. xxii fig. 10, LICHAREW 34.

†*Meekella* p. 82, *uralica* p. 82 pl. xvii figs. 3a-c, LICHAREW 33.—*M.* p. 79, *eximia* p. 79 pl. xvi figs. 5-6, LICHAREW 34.

†*Meekella* (*Orthotetina*) *eusarcos*, LICHAREW 34 p. 80 pl. xvi fig. 7.

†*Productella subalataformis* sp. n. Carboniferous China (Hunan), OZAKI J. Shanghai Sci. Inst. (2) 2 7 1939 pp. 237-238 pl. xxxv figs. 9a-e.

†*Productus* p. 85, *neoinflatus* sp. n. pp. 90-91 pl. xxi figs. 2-3 Carboniferous Russia, *boliviensis* p. 92 pl. xxi figs. 5a-c, *cora* p. 88 pl. xix figs. 5-7 with vars. *dorotheevi* p. 89 pl. xx figs. 1a-b, and *neffedievi* p. 89 pl. xix figs. 8a-b, pl. xx fig. 2, *donetzianus* p. 91 pl. xx figs. 5-6, *gruenewaldti* p. 92 pl. xxii figs. 1-2, *moelleri* p. 91 pl. xxi figs.

4a-c, *pseudoprattenianus* p. 90 pl. xx figs. 3-4, *uralicus* p. 20 pl. xxi figs. 1a-d, LICHAREW in The Atlas of the leading forms of the fossil faunas of [the] U.S.S.R. 5 Moscow-Leningrad 1939.—*P.* p. 83, *bellerophonoides* sp. n. p. 89 pl. xx fig. 1 Permian Russia, *aagardi* p. 89 pl. xviii fig. 6, *artiensis* p. 87 pl. xviii fig. 5, *cancrini* p. 90 pl. xx fig. 2 with var. *globularis* p. 90 pl. xx fig. 3, *cancriniformis* p. 91 pl. xx fig. 7, *cora* p. 88 pl. xix fig. 3 and var. *lineata* p. 89 pl. xix fig. 4, *gratiosus* p. 91, *hemisphaerium* p. 87 pl. xix fig. 2, *intermedius* p. 93 pl. xxi fig. 1, *kolymaensis* p. 90 pl. xx fig. 6, *koninckianus* p. 90 pl. xix figs. 5-6, *kutorgai* p. 87 pl. xviii fig. 4, *orientalis* p. 85 pl. xvii figs. 9-10, *pseudohorridus* p. 92, *stuckenbergianus* p. 92 pl. xx figs. 4-5, *timanicus* p. 92 pl. xx figs. 9-10, *transversalis* p. 85 pl. xviii figs. 1-2, *tschernyschewi* p. 88 pl. xviii fig. 8, *uralicus* p. 86 pl. xviii fig. 7, *velensis* p. 88 pl. xviii fig. 3, *yangtzeensis* var. *rossica* p. 86 pl. xix fig. 1, LICHAREW Atlas of the leading forms of the fossil faunas of the U.S.S.R. 6 1939.

†*Productus* (*Buxtonia*) *kalitvaensis* sp. n. p. 87 pl. xix figs. 1-2, *subpunctatus* p. 87 pl. xviii figs. 4-5 with vars. *araucaritica* p. 88 pl. xix figs. 3-4 and *shurabensis* p. 88 pl. xviii figs. 6-7 vars. n. Carboniferous Russia, *gjeliensis* p. 87 pl. xviii fig. 3, *saranaeuanus* p. 86 pl. xvii fig. 12, pl. xviii figs. 1-2, LICHAREW in The Atlas of the leading forms of the fossil faunas of [the] U.S.S.R. 5 Moscow-Leningrad 1939.—*B. sp.*, MUIR-WOOD in MUIR-WOOD & OAKLEY 40 p. 56.

†*Productus* (*Dictyoclostus*) *hunanensis* p. 242 pl. xxxvii figs. 3a-f, *tienping-waensis* pp. 241-242 pl. xxxvi figs. 3a-e spp. n. Carboniferous China (Hunan), *inflatus* p. 238 pl. xxxvi figs. 2a-h, cf. *gruenewaldti* p. 239 pl. xxxvii fig. 1, cf. *taiyuanfuensis* p. 240 pl. xxxvii figs. 2a-b, OZAKI J. Shanghai Sci. Inst. (2) 2 7 1939.—*D. cf. gratiosus* p. 16 pl. i fig. 13, cf. *subcostatus* p. 14 pl. i fig. 14, MUIR-WOOD in MUIR-WOOD & OAKLEY 40.

†*Productus* (*Gigantella*) *edelburgensis* ? var. *shajenwaensis* var. n. pp. 242-244 pl. xxxvii figs. 4a-b, pl. xxxviii figs. 1a-d, pl. xxxix figs. 2a-b Carboniferous China (Hunan), *edelburgensis* ? var.

nov. ? [1] p. 244 pl. xxxix figs. 1a-e, var. nov. ? [2] p. 244 pl. xxxviii figs. 2a-b, sp. p. 245 pl. xxxviii fig. 3, OZAKI J. Shanghai Sci. Inst. (2) 2 7 1939.

†*Productus (Pustula) pseudoaculeatus*, LICHAREW 33 p. 85 pl. xvii figs. 8a-c.—*P. (P.) fasciatus* p. 84 pl. xxi fig. 7, *irginaeformis* p. 84 pl. xxi fig. 5, *praepermicus* p. 83 pl. xxi figs. 3-4 *verhoyanicus* p. 84 pl. xx fig. 8, LICHAREW 34.—*P.* sp., MUIR-WOOD in MUIR-WOOD & OAKLEY 40 pp. 21, 55 pl. i figs. 10-12.

†*Productus (Striatifera) compressus* p. 94 pl. xxii figs. 1-3, *djoulfensis* p. 93 pl. xxii fig. 4, *obrutschewi* p. 93 pl. xxii fig. 5, LICHAREW 34.

†*Productus (Urushtenia) pseudomediterranea*, LICHAREW 34 p. 94.

†*Scacchinella* p. 96, *gigantea* p. 96 pl. xxiii figs. 2a-c, LICHAREW 33.

†*Strophalosia* p. 96, *pojangensis* var. *occidentalis* var. n. p. 97 pl. xxiii figs. 5-6 Permian Russia, *netschajewi* p. 97 pl. xxiii fig. 4, *sibirica* p. 97 pl. xxiii figs. 2-3, LICHAREW Atlas of the leading forms of the fossil faunas [of the] U.S.S.R. 6 1939.—*S.* p. 95, *dalhousi* p. 95 pl. xxii figs. 12a-c, LICHAREW 33.

†*Strophalosia (Aulosteges) horrescens* p. 96 pl. xxiii fig. 1, *wangenheimi* p. 96 pl. xxii fig. 11, LICHAREW 34.

†*Teguliferina* p. 95, *mjatschkowensis* p. 96 pl. xxii figs. 13a-b, *rossica* p. 96 pl. xxii figs. 14-16, LICHAREW 33.

†*Tschernyschewia* p. 98, *typica* p. 98 pl. xxiii fig. 10, LICHAREW 34.

†*Waagenoconcha* p. 23, *purdoni* p. 24 pl. i figs. 15a-b, MUIR-WOOD in MUIR-WOOD & OAKLEY 40.

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†*Prorichtfofenia* p. 99, *kingi* sp. n. p. 99 pl. xxiii fig. 11 Permian Russia, LICHAREW Atlas of the leading forms of the fossil faunas [of the] U.S.S.R. 6 1939.

†*Richthofenia* p. 99, *caucasica* p. 99 pl. xxiv figs. 1-2, LICHAREW 34.

†*Tectarea* p. 98, *robinsoni* p. 98 pl. xxiii figs. 7-9, LICHAREW 34.

OLDHAMINIDAE.

†*Keyserlingina* p. 97, *filicis* p. 97 pl. xxii figs. 17-18, LICHAREW 33.

†*Lyttonia* p. 100, *mira* p. 101 pl. xxiv fig. 5, *richthofeni* p. 100 pl. xxiv fig. 6 with forma *nobilis* p. 101 pl. xxiv fig. 4, LICHAREW 34.

†*Oldhamina* p. 101, *transkaukasica* p. 101 pl. xxiv fig. 7, LICHAREW 34.

†*Poikilosakos* p. 100, *tschernyschewi* p. 100 pl. xxiv fig. 3, LICHAREW 34.

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†*Isogramma* pp. 43-44, *manchoukuensis* sp. n. pp. 44-46 fig. 1 pl. ii figs. 5-11 Carboniferous Manchoukuo, *concentrica* p. 45 pl. ii fig. 3, *millepunctata* p. 45 pl. ii figs. 1-2, *paotechovensis* pl. ii fig. 4, HATAI & OMURA J. Geol. Soc. Japan 48 568 1941.—*I.* p. 83, *paotechovense* p. 83 pl. xvii figs. 1-2, LICHAREW 33.

ORDER TELOTREMATA.

RHYNCHONELLACEA.

CAMAROTOECHIIDAE.

†*Camarotoechia* ? *jonesi* sp. n. p. 186 pl. xvii figs. 1-10 Silurian Canada, cf. *jonesi* p. 186, *borealis*, *fringilla* p. 184, *modica* p. 185 pl. xvii figs. 11-14, *vicina* p. 184, NORTHROP Spec. Pap. geol. Soc. Amer. Washington 21 1939.—*C.* cf. *obtusiplicata* p. 9 fig. 2, sp. p. 9 fig. 2, LAMONT 30.—*C.* sp., MUIR-WOOD in MUIR-WOOD & OAKLEY 40 p. 25 pl. ii figs. 6-7.—*C. pleurodon*, OZAKI 44 p. 255 pl. xl fig. 8.

†*Pugnax* p. 103, *mutabilis* sp. n. pp. 103-104 pl. xxiv figs. 12-13 Permian Russia, LICHAREW Atlas of the leading forms of the fossil faunas [of the] U.S.S.R. 6 1939.—*P. chaoi* pp. 253-254 pl. xl figs. 6a-c, *hunanensis* pp. 254-255 pl. xl figs. 7a-i, *postmodicaformis* pp. 251-252 pl. xl figs. 5a-c, spp. n. Carboniferous China (Hunan), *utah* p. 250 pl. xl figs. 4a-i, OZAKI J. Shanghai Sci. Inst. (2) 2 7 1939.

†*Pugnoides texanus*, STAINBROOK & MADERA 56 p. 378 pl. lv figs. 6-9.

†*Rhynchopora* p. 99, *nikitini* p. 99 pl. xxiii figs. 6a-d, LICHAREW 33.—*R.* p. 104, *geinitziana* p. 104 pl. xxv fig. 4, *nikitini* p. 105 pl. xxv fig. 3, LICHAREW 34.

†*Rhynchotretra cuneata americana*, NORTHROP 42 p. 183.

†*Stegerhynchus whitei*, NORTHROP 42 p. 183.

†*Uncinulus hebe* p. 188 pl. xvii figs. 18–26, *stricklandi* p. 186, *wilsoni* and var. *saffordi* p. 187, NORTHROP 42.

†*Uncinunellina* p. 104, *tschernyschewi* sp. n. p. 104 pl. xxv fig. 2 Permian Russia, LICHAREV Atlas of the leading forms of the fossil faunas [of the] U.S.S.R. 6 1939.—U. p. 27, *jabiensis* p. 27 pl. ii fig. 1, MUTR-WOOD in MUTR-WOOD & OAKLEY 40.

†*Wellerella* p. 98, *connivens* p. 98 pl. xxiii figs. 5a–e, *keyserlingi* p. 99 pl. xxiii figs. 4a–e, LICHAREV 33.—W. p. 103, *arthaberi* p. 103 pl. xxv fig. 1 LICHAREV 34.

RHYNCHONELLIDAE.

†*Hemithyris psittacea*, RICHARDS 48 p. 10 pl. i fig. 7.

†“*Rhynchonella*” *durangensis* sp. n. Cretaceous Mexico, IMLAY Bull. geol. Soc. Amer. Washington 51 1940 pp. 139–140 pl. ii figs. 19–36.

†*Rhynchonelloidea cynica*, KELLAWAY & WILSON 27 p. 169 pl. ix figs. 7–8.

ATRYPACEA.

ATRYPIDAE.

†*Atrypa reticularis*, LAMONT 30 p. 9 fig. 2₈.—*A. reticularis*, NORTHROP 42 p. 189.

†*Atrypina disparilis*, NORTHROP 42 p. 189.

COELOSPIRIDAE.

†*Coelospira hemispherica*, LAMONT 30 p. 9 figs. 2₈, 4.—*C. hemispherica*, NORTHROP 42 p. 190.

SPIRIFERACEA.

SPIRIFERIDAE.

†*Ambocoelia*, LICHAREV 33 p. 108.—*A.*, LICHAREV 34 p. 113.

†*Ambocoelia* (*Crurithyris*) *tschernyschewi* sp. n. Carboniferous Russia, LICHAREV in the Atlas of the leading forms of the fossil faunas of [the] U.S.S.R. 5 1939 p. 108 pl. xxvii figs. 5a–d.—*A.* (*C.*) *tschernyschewi* sp. n. Permian Russia, LICHAREV Atlas of the leading forms of the fossil faunas [of the] U.S.S.R. 6 1939 p. 114 pl. xxv fig. 11.

†*Choristites* p. 103, *semichatovae* nom. n. pp. 105–6 pl. xxiv figs. 8a–b, *fritschii* emended p. 106 with var. *ferganica* var. n. p. 106 pl. xxvi figs. 2a–b Carboniferous Russia, *mosquensis* p. 104 pl. xxv figs. 3a–c, *pavlovi* p. 106 pl. xxvi figs. 3a–b, *priscus* p. 105 pl. xxv figs. 5a–c, *sowerbyi* p. 104 pl. xxv figs. 4a–d, *supramosquensis* p. 105 pl. xxv figs. 6–7, *trautscholdi* p. 107 pl. xxvi figs. 1a–c, *uralicus* p. 104 pl. xxvi figs. 1–2, LICHAREV The Atlas of the leading forms of the fossil faunas of [the] U.S.S.R. 5 Moscow-Leningrad 1939.—*Spirifer* (*C.* ?) *hsinchiaawaensis* pp. 260–261 pl. xli figs. 10a–c, pl. xli figs. 3a–c, *hsinhuaensis* pp. 258–260 fig. 2 pl. xli figs. 2a–i spp. n. Carboniferous China (Hunan), OZAKI J. Shanghai Sci. Inst. (2) 2 7 1939.

†*Crispella elegans*, NORTHROP 42 p. 191.

†*Eomartiniopsis elongatus* sp. n. [nom. nud.] Carboniferous Russia, SOKOLSKAJA Pan-Amer. Geol. 75 1941 p. 256.

†*Eospirifer radiatus* p. 190, cf. *eudora* p. 191, NORTHROP 42.

†*Martinia* p. 109, *orientalis* p. 110 pl. xxviii figs. 2a–d, LICHAREV 33.—*M.* p. 111, *ashaensis* p. 111 pl. xxviii fig. 2, *kumpani* p. 112 pl. xxvii figs. 6–7, LICHAREV 34.—*M.* ? cf. *semiconvexa*, OZAKI p. 267 pl. xliii figs. 3a–c.

†*Martiniella* ? *chinglungensis*, OZAKI 44 p. 268 fig. 7 pl. xliii figs. 4a–e.

†*Neophricodothyris* p. 108, *asiatica* p. 109 pl. xxvii figs. 6a–d, *rostrata* p. 109 pl. xxviii figs. 1a–d, LICHAREV 33.—*N.* p. 114, *indica* p. 114 pl. xxvii fig. 5, LICHAREV 34.

†*Neospirifer* p. 29, *moosakhailensis* p. 30 pl. ii figs. 12–13, MUTR-WOOD in MUTR-WOOD & OAKLEY 40.

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†*Spirifer* with *Yavorskiella* subgen. n. [nom. nud.] for type *S. (Y.) mamontoviensis* sp. n. [nom. nud.] Devonian Russia (Kuznetsk basin), LAZUTKIN in YAVORSKY Soviet Geology 1940 12 p. 44.

†*Spiriferella* p. 35, *rajah* pp. 36, 56 pl. ii figs. 2-3, 9-11, MUIR-WOOD in MUIR-WOOD & OAKLEY 40.—*Spirifer* (*S.*) p. 110, *rajah* p. 110 pl. xxvii fig. 3,

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†*Syringothyris lydekkeri*, MUIR-WOOD in MUIR-WOOD & OAKLEY 40 p. 40 pl. ii fig. 8.—*S. hannibalensis*, SOKOLSKAJA 53 p. 257.

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†*Tetractinella* genus discussed p. 902, *trigonella* p. 902 pl. i figs. 1-4, 8 CLOUD 12.

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†*Rensselandia cordiforme* sp. n. pp. 43-44 fig. 10A pl. viii figs. 2, 7-8 Devonian U.S.A. (Iowa), *johanni* p. 43 fig. 10B pl. viii fig. 3, *missouriensis* p. 44 fig. 10C pl. viii fig. 1, STAINBROOK J. Paleont. Menasha, Wis. 15 1941.

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†*Cranaena cooperi* sp. n. pp. 905-906 pl. i figs. 17-19 Devonian U.S.A. (Iowa), *littletonensis* p. 906 fig. 16, *thomasi* p. 906 pl. i figs. 13-15, CLOUD Amer. J. Sci. New Haven 239 1941.—*C. arcuosa* pp. 53-54 fig. 7 pl. viii figs. 27-30, *inflata* pp. 49-51 fig. 6 pl. vii figs. 26-29, *lata* p. 46 fig. 1 pl. vii figs. 16-20, pl. viii figs. 4-6, *littletonensis* pp. 48-49 fig. 4 pl. viii figs. 39-44, *subglobosa* pp. 47-48 fig. 3 pl. viii figs. 17-26, *sublingulata* p. 47 fig. 2 pl. vii figs. 11-13, 30, *thomasi* pp. 54-55 pl. vii figs. 9-10, 14-15 spp. n. Devonian U.S.A. (Iowa), *elia* p. 52 pl. viii figs. 35-38, *iowensis* p. 44 fig. 8 pl. vii figs. 1-5, 25, *jucunda* p. 53 pl. viii figs. 31-34, *romingeri* p. 51 fig. 5 pl. viii figs. 9-16, *subcylindrica* p. 54 pl. vii figs. 21-24, *subovata* p. 45 fig. 9 pl. vii figs. 6-8, STAINBROOK J. Paleont. Menasha, Wis. 15 1941.

†*Dielasma schucherti*, BRILL 8 p. 316 pl. x figs. 1-4.—*D.* p. 112, *plica* p. 112 pl. xxviii figs. 7a-d, LICHAREW 33.—*D.* p. 118, *elongatum* p. 118 pl. xxix fig. 8, *giganteum* p. 119 pl. xxix fig. 10,

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†*Heterelasmina* gen. n. [apparently a new genus. It is quoted as "*Heterelasmina* Licharew in litt.," but has not appeared hitherto in the Z.R.] p. 120 with *H. dieneri* (Gemmellaro 1899) [only species mentioned] p. 120 pl. xxix fig. 11 and vars. *cuboides* and *planiventrum* vars. n. p. 120 Permian Russia, LICHAREW Atlas of the leading forms of the fossil faunas [of the] U.S.S.R. 6 1939.

†*Notothyris* p. 113, *nucleolus* p. 115 pl. xxviii figs. 8-9, LICHAREW 33.—*N.* p. 120, *nucleolus* p. 120 pl. xxix fig. 12, LICHAREW 34.

†*Pseudodielasma* gen. n. p. 317 for type *P. perplexa* sp. n. pp. 317-318 fig. 10 pl. x figs 5-12 Permian U.S.A. (Texas), BRILL Bull. geol. Soc. Amer. Washington 51 1940.

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†"*Terebratula*" *coahuilensis* pp. 140-142 fig. 6 pl. i figs. 1-16, *kanei* p. 142 pl. i figs. 17-20 Cretaceous Mexico, IMLAY Bull. geol. Soc. Amer. Washington 51 1940.

†*Terebratulina guadalupae*, FOSCUE, LONGNECKER & ALBRITTON 16 p. 57.

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†*Antiptychina* ? *formosa* sp. n. Cretaceous Mexico, IMLAY Bull. geol. Soc. Amer. Washington 51 1940 pp. 138-139 fig. 7 pl. ii figs. 1-18.

†*Cheirothyris* genus discussed p. 903, *fleuriausa* pl. i figs. 5-7, 9-12, CLOUD 12.

†*Neotrigonella* stated to be either a nomen nudum or a homonym of *Tetractinella*, CLOUD, 12 p. 902.

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Vol. LXXVI 1939 p. 14 2nd col., for *Rhytistrophia* gen. n. read *Rhytistrophia* gen. n.

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BY

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2.—Bassler, R. S. Generic descriptions of Upper Paleozoic Bryozoa. J. Wash. Acad. Sci. 31 5 1941 pp. 173-179 24 text-figs.

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†*Amphiporella*, redefined, BASSLER J. Wash. Acad. Sci. 31 1941 p. 174.

†*Batostomella cylindrica*, sp. n. Permian E. Australia, CROCKFORD J. Roy. Soc. N.S.W. 74 4 1941 p. 504.—*B.* sp. 1, *B.* ? sp. 2, *B.* sp. 3, SUGIYAMA 31 pp. 190, 191.

†*Callocladia*, redefined, BASSLER J. Wash. Acad. Sci. 31 1941 p. 176.

†*Coeloclemis*, redefined, BASSLER J. Wash. Acad. Sci. 31 1941 p. 174.

†*Dyscritella*, redefined, BASSLER J. Wash. Acad. Sci. 31 1941 p. 178.

†*Hallopora tolli*, FRITZ 13 p. 564.

†*Lioclema nechoroschevi*, SHULGA-NESTERENKO 28 p. 75.

†*Pycnopora*, redefined, BASSLER J. Wash. Acad. Sci. 31 1941 p. 176.

†*Stenocladia*, redefined, BASSLER J. Wash. Acad. Sci. 31 1941 p. 176.

†*Stenopora*, redefined, BASSLER J. Wash. Acad. Sci. 31 1941 p. 173.

†*Ulrichotrypa* a synonym of *Stenopora*, BASSLER J. Wash. Acad. Sci. 31 1941 p. 174.

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†*Anastomopora quebecensis* sp. n. Devonian Canada, FRITZ Bull. Amer. Pal. 24 82A 1938 p. 5.

†*Fenestella* proposed as *nomen conservandum*, CONDRA & ELIAS 7 p. 339; 8 p. 565.

†*Fenestella quadratopora*, *multiportaeformis*, *microfenestrata*, *cavifera*, *ornata*, spp. n. *F. elegantissima* var. *microporata*, *foraminosa* var. *grandis* varr. n. *F. bifida*, *foraminosa*, *eichwaldi*, *basleoensis*, *microcellata*, *shtchugorensis*, *retiformis*, *wjatkaensis*, Permian U.S.S.R., SHULGA-NESTERENKO Atlas Fossil Faunas U.S.S.R. 6 1939 pp. 65-71.

†*Fenestrellina bituberculata*, *altacarinata*, *quinquecella*, *granulifera*, *canthariformis* spp. n. pp. 506-510 Permian E. Australia, *F. fossula*, *exserta*, *F. cavea* a synonym of *F. exserta* pp. 399, 403, CROCKFORD J. Roy. Soc. N.S.W. 74 4 1941.—*F. occidentalis*, *gaspiensis* spp. n. Devonian Canada, FRITZ Bull. Amer. Pal. 24 82A 1938 pp. 6, 7.—*F. multiseriata* sp. n. Devonian Canada, FRITZ J. Paleont. Menasha, Wis. 15 1 1941 p. 41.

†*Goniocladia varians*, *pulchra*, *crassa*, SHULGA-NESTERENKO 28 p. 74.

†*Hexagonella petchorica*, SHULGA-NESTERENKO 28 p. 75.

†*Idioclema*, redefined, BASSLER J. Wash. Acad. Sci. 31 1941 p. 179.

†*Lyrocladia pulchra* sp. n., *L. permica*, Permian U.S.S.R. SHULGA-NESTERENKO Atlas Fossil Faunas U.S.S.R. 6 1939 pp. 72, 71.

†*Nemataxis*, redefined, BASSLER J. Wash. Acad. Sci. 31 1941 p. 178.

†*Polypora dichotoma*, *triseriata*, *multi-nodata*, *magnafenestrata*, *linea* spp. n. pp. 511–514, Permian E. Australia, *P. montuosa*, *virga*, *pertinax*, *internata*, *woodsii*, *P. tumula* a synonym of *P. woodsii*, pp. 409–414, CROCKFORD J. Roy. Soc. N.S.W. 74 4 1941.—*P. orientalis* sp. n. Devonian Canada, FRITZ Bull. Amer. Pal. 24 82A 1938 p. 7.—*P. biarmica*, *cyclopora*, *kolvae*, SHULGA-NESTERENKO 28 pp. 72, 73.

†*Protoretetepora ampla*, CROCKFORD 9 p. 406.

†*Ptilopora carinata* sp. n. Permian E. Australia, CROCKFORD J. Roy. Soc. N.S.W. 74 4 1941 p. 515.

†*Rhombopora filiformis* sp. n. Permian E. Australia, CROCKFORD J. Roy. Soc. N.S.W. 74 4 1941 p. 517.

†*Syringoclemis*, redefined, BASSLER, J. Wash. Acad. Sci. 31 1941 p. 178.

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9. MOLLUSCA.

BY

A. E. SALISBURY, A.M.I.E.E.

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I.—TITLES.

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Note.—The arrangement here used follows, in general, that of Thiele's *Handbuch*. The most important differences are that Epitoniacea and Pyramidellacea are placed immediately preceding Muricacea in order of grouping, and the families Triviidae and Eratoidae are placed in Lamellariacea.

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†*Cryptoplax ludbrookae* sp. n. Pliocene, bore at Holden's Motor Body Works, Woodville, South Australia (335-380 feet), E. ASHBY Trans. roy. Soc. S. Aust. 64 2 1940 p. 266 text-fig.

Ischnochiton (Lepidozona) catalinae sp. n. off White's landing, Catalina Island, California, G. WILLETT Bull. S. Calif. Acad. Sci. 39 3 1940 p. 185 pl. 31.

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†*Haliotis gigantoides* sp. nov. Pliocene. Yard of the Nakōsi Primary School, Hanezi-mura, Kunigamigun, Japan, YABE & HATAI Japan. J. Geol. Geogr. 18 1-2 1941 p. 76 pl. vii (i) f. 1.

†*Pleurotomaria sismondai densicosta* var. nov. p. 3; *P. retifera* sp. n. p. 3 pl. 1 f. 1, Rupelian Buda Pest district, J. NOSZKY Ann. hist.-nat. Mus. hung. Min.-Geol. 33 1940.

†*Pleurotomarium* aff. *orientalis* Roemer fig., MUIR-WOOD & K. P. OAKLEY 235.

†*Schismope kaiparaensis* sp. n. [Miocene] Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 2 1941 p. 137 pl. 16 f. 9.

Straparollus lachiensis sp. n. Carboniferous, Lachi series, North Sikkim, K. P. OAKLEY Palaeont. indica N.S. 31 1 1941 pp. i 10 pl. iv f. 1a-b.

†*Tugalia elata* sp. n. Cement Works, Railway Tunnel, Lower Moorabool River (Barwonian, Tertiary), Victoria, E. H. CHAPPLE Mem. nat. Mus. Melbourne 12 1941 p. 119 pl. xiv f. 8 8a.

†*Tugali infortunatum* sp. n. Pliocene Adelaide, S. Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. 65 1 1941 p. 82 pl. iv f. 1.

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†*Archinacella unica* sp. n. Drummuck Group (Ordovician), South Threave, Ladyburn, F. R. C. REED Geol. Mag. London 78 4 1941 p. 275 pl. v f. 5 5a.

†*Helcionella cincta* Lerm. (MS) figs.; *H. scalata* Lerm. (MS) figs. (p. 109, pl. xxxiv), E. V. LERMONTOVA 188.

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†*Tectura tauroconica grandiformis* var. nov. Rupelian [Oligocene] Buda Pest district, J. NOSZKY Ann. hist.-nat. Mus. hung. Min.-Geol. 33 1940 p. 9 pl. 1 f. 8.

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†*Argalista aequor* sp. n. [Miocene] Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 2 1941 p. 140 pl. 18 f. 27 29.

†*Astele fanaticum* sp. nov. Pliocene Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. 65 1 1941.

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Calliostoma kiheiziebisu **sp. n.** Japan, Y. OTUKA Venus 9 1939 pp. 27-29.

†*Calliostoma nonurum* **sp. n.** Punta Blanca beds, Pliocene, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941 p. 46 pl. 8 f. 7, 10, 11.

†*Calthalotia nitidissima* p. 83 pl. iv f. 11; *C. fictilis* p. 84 pl. iv f. 14: **spp. n.** Pliocene Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. 65 1 1941.

Cirsonella variecostata **sp. nov.** off Three Kings Islands in 140 fms., New Zealand, A. W. B. POWELL Trans. Proc. Roy. Soc. N.Z. 70 3 1940 p. 220 pl. 28 f. 9, 10.

†*Clanculus quadricingulatus* p. 82 pl. iv f. 2; *C. eucarinatus* p. 83 pl. iv f. 3: **spp. nov.** Pliocene Abattoirs bore, Adelaide, S. Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. 65 1 1941.

Conjectura carinata **sp. nov.** between Spirits Bay and Three Kings Islands in 50 fms. New Zealand, A. W. B. POWELL Trans. Proc. Roy. Soc. N.Z. 70 3 1940 p. 223 pl. 28 f. 8.

†*Conjectura congrua* **sp. n.** [Miocene] Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 2 1941 p. 139 pl. 19 f. 48.

†*Conominolia aflexura* **sp. n.** [Miocene] Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 2 1941 p. 138 pl. 17 f. 22.

†*Delphinula scobina baslaevis* (?) **var. nov.** Rupelian [Oligocene] Buda Pest district, J. NOSZKY Ann. hist. nat. Mus. hung. Min.-Geol. 33 1940 p. 4.

†*Dolicrossea labiata* Ten.-Woods, N. H. LUDBROOK.

†*Ethminolia perglobosa* **sp. nov.** Pliocene Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. 65 1 1941 p. 86 pl. iv f. 5.

†*Herpetopoma pliocenica* **sp. nov.** Pliocene Abattoirs bore, Adelaide

South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. 65 1 1941.

†*Laetifautor obliquicancellatus* p. 84 pl. iv f. 7; *L. spinicarinatus* p. 84 pl. iv f. 8; *L. crebrinodulosus* p. 85 pl. iv f. 9; *L. bicarinatus* p. 85 pl. iv f. 13: **spp. nov.** Pliocene Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. 65 1 1941.

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†*Lodderia supralevis* **sp. n.** [Miocene] Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 2 1941 p. 139 pl. 17 f. 18.

†*Lodderena anceps* **sp. n.** [Miocene] Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 2 1941 p. 140 pl. 19 f. 43.

†*Margarites (Lirularia) aresta* **sp. nov.** Lower Pleistocene, Hilltop Quarry, San Pedro, California, S. S. BERRY Bull. Amer. Paleont. Ithaca 27 101 1942 p. 13 pl. 1 f. 5.

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†*Partubiola depressispira* p. 87 pl. iv f. 16; *P. varilirata* p. 87 pl. iv f. 17: **spp. nov.** Pliocene Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. 65 1 1941.

†*Phasianotrochus laxegemmatum* p. 83 pl. iv f. 4; *P. subsimplex* p. 83 pl. iv f. 10: **spp. nov.** Pliocene Abattoirs

bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. **65** 1 1941.

†*Pulchrastele planiconicum* p. 86 pl. iv f. 6; *P. tuberculatum* p. 86 pl. iv f. 15: **spp. nov.** Pliocene, Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. **65** 1 1941.

†*Skenea* (?) *cyclostoma* **sp. nov.** Lower Pleistocene, Hilltop Quarry, San Pedro, California, S. S. BERRY Bull. Amer. Paleont. Ithaca **27** 101 1941 p. 14 pl. 1 f. 6, 7.

†*Turbo* (*Lunella*) *ozawai* **sp. n.** Miocene Tyugoku, Japan, Y. OTUKA J. Fac. Sci. Univ. Tokyo Sec. 2 **5** 1939 pp. 21-45 [non vidi] [abstract, Jap. J. Geol. Geogr. **17** 1, 2 1940].

†*Turbo* (*Bolma*) *muricata laevis* (?) **var. nov.** p. 5; *T. (Senectus) ranellae formis* **sp. nov.** p. 5 pl. 1 f. 4; *T. (S.) r. peralta* p. 6 pl. 1 f. 5; *T. (S.) r. granulata* p. 6 pl. 1 f. 6; *T. (S.) r. retifera* (?) p. 6; *T. (S.) r. simplex* (?) p. 6: **vars. nov.**, Rupelian [Oligocene] Buda Pest district, J. NOSZKY Ann. hist.-nat. Mus. hung. Min.-Geol. **33** 1940.

†*Umbonium miyagiense* **sp. nov.** Lower Miocene, Sennan District, Japan, NOMURA & ONISI Jap. J. Geol. Geogr. **17** 3-4 1940 p. 184 pl. xviii f. 13-16.

†*Zeminolia ordo* **sp. n.** [Miocene] Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. **71** 2 1941 p. 138 pl. 19 f. 46.

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†*Phenacolepas tela* **sp. n.** Pliocene, Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. **65** 1 1941.

Sphaeroconia regesta **sp. nov.** Purari Valley, Papua, T. IREDALE Aust. Zool. Sydney **10** 1 1941 p. 55.

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Swiftella **subgen. nov.** of *Stoastomops* [q.v.] sole species *boricuensis* **sp. n.** Puerto Rico, H. B. BAKER Notulae Naturae Philad. **88** 1941 p. 2.

†*Theodoxus fisheri* **sp. n.** Cherty freshwater bed, Middle Purbeck, E. of S. Alban's Hd., W. J. ARKELL Quart. J. Geol. Soc. London **97** 1 1941 p. 83 figs. 16, 17a-b (p. 91).

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aberrans Monte Verde, N.E. of Guantánamo, Oriente Province p. 347 pl. xli f. 1-3; *A. (Annularisca) pallens* "Guantánamo" U.S.N.M. 104552, p. 350 pl. xliii f. 4-6; *A. (Annularisca) tacrensis* **sp. nov.** Tacre, W. of Cajobabo, Oriente Province p. 351 pl. xl f. 4-6; *A. (Annularisca) intercisca* **sp. nov.** Ocuja, Vega Grande, Oriente Province p. 352 pl. xlii f. 1-3; *A. (Annularisca) incerta* La Cobreira, E. of Guantánamo p. 354 pl. xlv f. 1-3; *A. (T.) rocai* Las Barraqueras, Hongolosongo, Oriente Province p. 336 pl. xxxviii f. 3; *A. (Blasospira) echinus lucifer* **subsp. nov.** Sierra del Infierno p. 340 pl. xxxix f. 4; *A. (B.) e. infernalis* Sierra del Infierno p. 340 pl. xxxix f. 3; *A. (B.) rocai* **sp. nov.** [non *A. (T.) rocai* supra] Sitio de la Sierra, N. side of Sierra de San Andres p. 340 pl. xxxix f. 5; *A. (Subannularia) storchi nipensis* Farallones de Nipe, near Sabanilla p. 344 pl. xxxix f. 8; *A. (Bermudezia) bermudezi* **sp. nov.** Loma Marciélagos, Vega Alta, Santa Clara Province p. 356 pl. xlvi f. 1; *A. (B.) payroli* **sp. nov.** Lomas del Purio, Calabazar, Santa Clara Province p. 357 pl. xlvi f. 3; *A. (B.) obliterata* **sp. nov.** Cerro de Guajabana, Santa Clara Province p. 358 pl. xlvi f. 4; *A. (B.) capestanyi* **sp. nov.** Palenque de Taguayabón, near Remedios, Santa Clara Province p. 358 pl. xlvi f. 5; *A. (B.) euglypta* **sp. nov.** Loma Platero p. 359 pl. xlvi f. 6; *A. (Lagarenia) eurystoma* **sp. et subsp. nov.** Sierra del Cachimbo, Camagüey Province pp. 360 361 pl. xlvii f. 6; *A. (L.) e. chrrillensis* **subsp. nov.** Vereda del Telegrafo, Sierra del Chorrillo p. 361 pl. xlvii f. 2; *A. (L.) biayensis* **sp. nov.** Sierra de San Martin de Biaya, Camagüey Province p. 361 pl. xlvii f. 3; *A. (L.) najazaensis najazaensis* **sp. et subsp. nov.** El Cacuatol, Sierra de Najaza, southern part of Camagüey Province p. 362 pl. xlvii f. 7; *A. (L.) n. palomarensis* **subsp. nov.** Palomar de San José, Camagüey Province p. 363 pl. xlvii f. 8; *A. (L.) lirata lirata* **sp. et subsp. nov.** Guaicanamar, Camagüey Province p. 363 pl. xlvii f. 1; *A. (L.) l. parva* **subsp. nov.** La Caridad de Guerrero, Sierra de Guaicanamar p. 364 pl. xlvii f. 5; *A. (L.) sifontesi* **sp. nov.** Sierra del Cachimbo between Sierra de Najaza and El Chorrillo p. 364 pl. xlvii f. 4; *A. (Annularosa) fragilis juliani* **subsp. nov.** Jarahueca, Alto Songo, Oriente Province p. 365 pl. xlviii

f. 4-6; *A. (Annularella) hendersoni* **sp. nov.** Monte Libano near Guantánamo, Oriente Province p. 367 pl. xlix f. 1-3; *A. (Annularella) victoris* **sp. nov.** Zona de Caleta, Maisi, Oriente Province p. 369 pl. l f. 7-9; *A. (Annularella) arguesi* **sp. nov.** (= *Cyclostoma arguesi* Arango, nom. med. Ref. fis. nat. Isla de Cuba 2, p. 270, = *Colobostylus arguesi* Kob. & Mölldff. nom. nud. Nachr. D. Malak. Gesell. 30 p. 192 pars) Barigua, N. coast of Baracoa, Oriente Province p. 372, pl. li f. 4-6; *A. (Annularella) holguinensis* **sp. nov.** (= *Choanopoma alatum* in part Pfeiffer Mon. pneumon. viv. sup. 2, p. 110) Holguín, Oriente Province p. 373 pl. lii f. 1-3; *A. (Annularella) yumuriensis* **sp. nov.** Boca de Yumuri, Oriente Province p. 374 pl. lii f. 4-6; *A. (Annularella) nipensis* **sp. nov.** Farallones de Nipe (Sabanilla) Oriente Province p. 375 pl. lii f. 7-9; *A. (Annularella) tanamensis* **sp. nov.** (? = *Cistula interstitiale* Arango, in part Contrib. fauna malac. Cubana 1878 p. 22, ? = *C. i. Crosse* J. Conchyl. 1890 38 p. 286 in part) Ingenio El Coca, Sagua de Tanamo, Oriente Province p. 375 pl. liii f. 1-3; *A. (Annularella) natensoni* **sp. nov.** Silla de Baez, west of Baracoa, Oriente Province p. 377 pl. liii f. 4-6; *A. (Annularella) toroensis* **sp. nov.** Embrita, Monte Toro, Oriente Province p. 378 pl. liv f. 1-3; *A. (Annularella) wrighti* **sp. nov.** Ermitage between Santiago and Guantánamo, Oriente Province p. 380 pl. lv f. 4-6; *A. (Annularella) mayariensis mayariensis* **sp. et subsp. nov.** Cayo del Rey, Mayari, Oriente Province pp. 381, 382 pl. lvi f. 1-3; *A. (Annularella) m. welchi* **subsp. nov.** a hill N. of Miranda in the Mercedes Valley, Oriente Province p. 381 pl. lvi f. 4-6; *A. (Annularella) canapuenis* **sp. nov.** Farallones de Canapú, near Cayo del Rey, Oriente Province p. 382 pl. lvii f. 7-9; *A. (Chondropomatus) mimetica* **sp. nov.** Farrallón de San Lucas p. 385 pl. lvii f. 1-3, TORRE & BARTSCH Proc. U.S. Nat. Mus. Washington 89 3096 1941.

Annularodella **subgen. nov.** of *Annularia*, type *A. (Annularodella) morenoi* **sp. nov.** Ayongo, Las Jaguas Sagua, Santa Clara Province, Cuba, TORRE & BARTSCH Proc. U.S. Nat. Mus. Washington 89 3096 1941 pp. 302 303 pl. xxxiii f. 7.

Annularodisca subgen. nov. of *Annularia*, type *Choanopoma pilsbryi* Welch. 1929, TORRE & BARTSCH Proc. U.S. Nat. Mus. Washington 89 3096 1941 p. 289 pl. xxix f. 1.

Bermudezia subgen. nov. of *Annularia*, type *A. (B.) bermudezi* sp. nov. Loma Murciélagos, Vega Alta, Santa Clara Province, Cuba, TORRE & BARTSCH Proc. U.S. Nat. Mus. Washington 89 3096 1941 p. 356 pl. xlvi f. 1.

Bermudezsiphona subgen. nov. of *Opisthosiphon* p. 168, type *Opisthosiphon (Bermudezsiphona) bermudezi* sp. nov. Loma Murciélagos, Cuba p. 192 pl. xiv f. 6; [for spp. and subspp. nov. vide etiam sub *Opisthosiphon*], TORRE & BARTSCH Proc. U.S. Nat. Mus. Washington 89 3096 1941.

Biomora gen. nov. [notes on sole sp.] Pupinellidae type *Pupinella moulinsiana* Fischer & Bernardi Woodlark Island not New Caledonia, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 61.

Bithynia striatulus one of the intermediate hosts of *Clonorchis* in China, figs., K. WU 357.—*B. tentaculata*, W. NEUHAUS, 242.

Braziera aignanensis Hedley St. Aignan = Misima, Louisiades pl. iii f. 22, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 21.

Cubadamsiella subgen. nov. of *Adamssiella* Pfeiffer, subgenotype *A. (C.) gratiosa* sp. nov. Guajabana, Santa Clara Province, Cuba, TORRE & BARTSCH Proc. U.S. Nat. Mus. Washington 89 3096 1941 p. 240 pl. xxi f. 4.

Cubitasiphona subgen. nov. of *Opisthosiphon*, type *O. (C.) poeyi* sp. n. Cubitas Mts. Cuba, TORRE & BARTSCH Proc. U.S. Nat. Mus. Washington 89 3096 1941 p. 198 pl. xv f. 8.

Cyclotropidae *Cyclotropis*, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 58.

Cyclotropis rigens sp. nov. Br. New Guinea, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 59.

Cylindrosiphona subgen. nov. of *Opisthosiphon*, type *Opisthosiphon (Cylindrosiphona) bacillum* sp. nov. El Cacaotal, Sierra de Najaza, Cuba, TORRE & BARTSCH Proc. U.S. Nat. Mus. Washington 89 3096 1941 p. 215 pl. xix f. 4.

Dallsiphona gen. nov. Annulariidae genotype *Opisthosiphon dalli* Torre & Henderson 1920, TORRE & BARTSCH Proc. U.S. Nat. Mus. Washington 89 3096 1941 p. 216 pl. xix f. 6.

Didomasta gen. nov. Pupinellidae type *Pupinella macgregori* Smith, Rossel Island, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 60.

Diplommatina (Sinica) lenggongensis sp. nov. Lenggong, Perak, Malay Peninsula, J. R. LE B. TOMLIN Jour. Conch. London 21 10 1941 p. 319 pl. xiii f. 1.

Dominamaria gen. nov. [non des.] Pseudocyclotidae, type *Otopoma macgregoriae* Hedley, Purari Valley, Papua; *D. addita* sp. nov. Fly River, Papua; *D. ferelegans* sp. nov. N. of Orangerie Bay, Papua (*Cyclotus horridus* Smith) J. Malac. 5 p. 20 pl. ii f. 16-18, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 58.

Dramelia gen. nov. Hydrocenidae, type *Realia isseliana* Tapparone-Canefri, Purari Valley, Papua, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 52.

Ettemona gen. nov. [non des.] Cyclophoridae, type *E. perspicua* sp. nov. Purari Valley, Papua, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 56.

Euadnita gen. nov. Pupinidae, type *Diplommatina symmetrica* Hedley, only described from Baslaki (= Moresby) Is., T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 62.

Eutudorex subgen. nov. of *Tudora*, type *Cyclostoma rotundatum* Poey 1851, TORRE & BARTSCH Proc. U.S. Nat. Mus. Washington 89 3096 1941 p. 250 pl. xxiii f. 2.

Fantema gen. nov. [notes on sole sp.] Pupinellidae, type *Pupinella minor* Smith, Rossel Island, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 61.

Fossularia subgen. nov. of *Annularia*, type *A. (F.) boqueronensis* sp. nov. Boquerón del Jalibonico, Santa Clara Province, Cuba, TORRE & BARTSCH Proc. U.S. Nat. Mus. Washington 89 3096 1941 pp. 308, 309 pl. xxxiv f. 6.

Guajaibona subgen. nov. of *Annularia*, type *Cyclostoma pretrei* Orb., Sagra's Hist. Ile de Cuba 1842 1 p. 260

pl. xxii f. 9-11, TORRE & BARTSCH Proc. U.S. Nat. Mus. Washington 89 3096 1941 p. 341 pl. xxxix f. 7.

Gundlachtudora subgen. nov. of *Tudora*, type *Cyclostoma decoloratum* (Gundlach) Pfeiffer, TORRE & BARTSCH Proc. U.S. Nat. Mus. Washington 89 3096 1941 p. 265 pl. xxviii f. 3.

Helaposa gen. nov. Pupinellidae, type *Pupinella crossei* Brazier, Yule Is., T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 61.

Japonia musiva fig., T.-C. YEN 361.

Juannularia subgen. nov. of *Annularia*, type *Cyclostoma (Choanopoma) perplicatum* Gundlach Cabo Cruz, Oriente Province, TORRE & BARTSCH Proc. U.S. Nat. Mus. Washington 89 3096 1941 p. 320 pl. xxxvii f. 5.

Lagochilus Blanford, the Chinese species *Lagochilus sexfilaris* figured, T.-C. YEN 361.

Leptopoma nitidum sanctum Misima, *L. n. faber* Tube Tube, Engineer Group; subsp. nov. *L. infectum* sp. nov. Purari Valley, Papua, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 56.

Limadora gen. nov. Annulariidae, genotype *Rhytidopoma tollini* Ramsden 1915 p. 245 pl. xxii f. 1, 4; *L. garciana sillaensis* subsp. nov. Sao Arriba, 4 m. N.E. of Holguin, Oriente Province p. 247 pl. xxii f. 2; *L. scabrata* sp. nov. Finca, Santa Maria (de Riveron), Marti, Loma de Sibanicú, Camagüey Province p. 247 pl. xxii f. 3; Cuba, TORRE & BARTSCH Proc. U.S. Nat. Mus. Washington 89 3096 1941.

Limadorex gen. nov. Annulariidae, genotype *L. limonensis* sp. nov. El Toro, Sierra de Limones, Pinar del Rio, Cuba, TORRE & BARTSCH Proc. U.S. Nat. Mus. Washington 89 3096 1941 p. 244 pl. xxii f. 6, 7.

Litabella subgen. nov. of *Bellardiella* Tap. Can. for a Papuan unnamed var. of *B. minor* Hedley, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 62.

Lugarenia subgen. nov. of *Annularia*, type *A. (L.) najazaensis* sp. nov. El Cacaotal, Sierra de Najaza, Camagüey Province, TORRE & BARTSCH Proc. U.S. Nat. Mus. 89 3096 1941 pp. 360, 362 pl. xlvii f. 7.

Marisa rotula Mouss. fig., W. T. INNES 153.

Mirisiphon subgen. nov. of *Opisthosiphon*, type *Opisthosiphon (Mirisiphon) sculptum* "[Gundlach] Pfeiffer," TORRE & BARTSCH Proc. U.S. Nat. Mus. Washington 89 3096 1941 p. 167.

Murdochia ampla sp. n. Unuchao 800-900 feet between Spirits Bay and Tom Bowling Bay, Northern New Zealand, A. W. B. POWELL Rec. Auckland Inst. Mus. 2 5 1941 p. 260 pl. li f. 10.

Opisthocoelex subgen. nov. of *Opisthocoele* gen. nov. [q.v.], type *Opisthocoele (Opisthocoelex) paradoxum* (Torre and Henderson) [for spp. et subsp. nov. vide sub *Opisthocoele*], TORRE & BARTSCH Proc. U.S. Nat. Mus. Washington 89 3096 1941 p. 134 pl. ix f. 2.

Opisthocoele gen. nov. p. 134 subgen. nov. p. 140, of Annulariidae, type *O. (Opisthocoele) opisthocoele* sp. n. El Purio, Encrucijada, Province of Santa Clara, Cuba p. 140 pl. ix f. 8. The new genus includes also subgenera *Opisthocoele* and *Opisthocoele* q.v.; *Opisthocoele (Opisthocoelex) paradoxum gibbosum* subsp. nov. Sitio Afuera, Cubitas Mts., Camagüey Province, Cuba p. 136 pl. ix f. 9; *O. (O.) p. magnum* subsp. nov. Finca Gertrudis, foothills of Cubitas Mts., Camagüey Province, Cuba p. 136 pl. ix f. 3; *O. (O.) simulans* sp. nov. Finca Los Cangilones foothills of Cubitas Mts., Camagüey Province, Cuba, p. 137 pl. ix f. 4; *O. (Opisthocoele) occultum* Torre & Henderson 1921, non Henderson & Bartsch 1920 a nom. nud. p. 138; *O. (Opisthocoele) lamellicostatum mabuyense* subsp. nov. Mabuya, near Florencia, Camagüey Province, Cuba, p. 142 pl. ix f. 6, TORRE & BARTSCH Proc. U.S. Nat. Mus. Washington 89 3096 1941.

Opisthocoele subgen. nov. of *Opisthocoele* gen. nov. [q.v.], type *Opisthocoele (Opisthocoele) excurrens* "[Gundlach] Pfeiffer" [for spp. nov., vide sub *Opisthocoele*], TORRE & BARTSCH Proc. U.S. Nat. Mus. Washington 89 3096 1941 p. 138.

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pl. xii f. 3; *O. (B.) p. camajanense* subsp. nov. Camaján, Yaguajay, p. 171 pl. xii f. 1; *O. (B.) greenfieldi* sp. nov. on rocks Sitio Afuera south end of the Paso de la Escalera, Cubitas Mts., Camagüey Province, p. 171 pl. xii f. 11; *O. (B.) lamellosum lamellosum* sp. et subsp. nov. Espinosa, Chambas, Camagüey Province p. 173 pl. xii f. 4; *O. (B.) l. lowei* subsp. nov. Dos Sierras, Santa Clara Province p. 173 pl. xii f. 6; *O. (B.) plateroense* sp. nov. north slope of Loma Platero, near Jagüey, Santa Clara Province p. 173 pl. xii f. 10; *O. (B.) prominulum* sp. nov. Cambao, Yaguajay, Santa Clara Province p. 174 pl. xii f. 2; *O. (B.) banaoense trincherasense* subsp. nov. in the Paso de las Trincheras western end of the Cubitas Mts. Cuba p. 176 pl. xii f. 9; *O. (B.) obturatum sulcosum* subsp. nov. Salto del Paso Tinaja p. 177 pl. xiii f. 12; *O. (B.) obtectum seibaboense* subsp. nov. Vereda de Herrera, Seibabo, Yaguajay, Santa Clara Province p. 178 pl. xiii f. 4; *O. (B.) obtectum guayosense* subsp. nov. caves near Guayos, Santa Clara Province p. 180 pl. xiii f. 2; *O. (B.) insulanum insulanum* sp. et subsp. nov. on Cayo de la Aguada, east of Caibarién pp. 180-181 pl. xiii f. 7; *O. (B.) sub-obturatorum tinajense* subsp. nov. from the paredones 2.5 km. from north entrance to Paso de la Tinaja, Cuba p. 184 pl. xiii f. 13; *O. (B.) caguanense* sp. nov. Cayo Caguanes, Yaguajay, Santa Clara Province, Cuba p. 185 pl. xiv f. 12; *O. (B.) subobtectum sub-obtectum* sp. et subsp. nov. Rojas, near Remedios, Santa Clara Province, Cuba, pp. 186-187 pl. xiv f. 2; *O. (B.) s. puntillense* subsp. nov. La Puntilla 2 m. west of Remedios, Santa Clara Province p. 187 pl. xiv f. 3; *O. (B.) s. guajabanense* subsp. nov. Cerro de Guajabana, near Caibarién p. 188 pl. xiv f. 13; *O. (B.) s. quintanense* subsp. nov. Loma de Quintana 4 m. s.-w. of Caibarién p. 188 pl. xiv f. 14; *O. (B.) detectum murenum* subsp. nov. Cayo Ratones east of Caibarién, Santa Clara Province p. 191 pl. xiv f. 8; *O. (B.) d. lucasense* subsp. nov. Cayo Lucas, east of Caibarién p. 191 pl. xiv f. 7; *O. (B.) bermudezi* sp. nov. Loma Murciélagos p. 192 pl. xiv f. 6; *O. (Opisthosphona) pupoides pupoides* subsp. nov. many stations in the Sierra de Casas p. 194 pl. xv f. 4; *O. (O.) p. velazquezii* subsp. nov. Sierra de Caballos p. 194 pl. xv f. 6; *O. (O.) p. bibijaguaense* Sierra de

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†*Circulus occidentalis* sp. n. Canoa formation, Pliocene, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941 p. 48 pl. ix f. 3.

†*Dardanula subexcarvata* p. 142 pl. xix f. 39; *D. sedicula* p. 142 pl. xvi f. 10; spp. n. [Miocene] Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 2 1941.

†*Estea asymmetrica* sp. n. [Miocene] Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 2 1941 p. 140 pl. xviii f. 28.

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†*Hydrobia forbesi* sp. n. Middle Purbeck, Freshwater beds of Ridgeway, W. J. ARKELL Quart. J. Geol. Soc. London 97 1 1941 p. 93 f. 9, 10 (p. 91).

Hypsobia tangi sp. nov. Ying-an Central Fukien Province, China, S.-F. CHEN Naut. Philad. 55 1 1941 p. 17 text-figs 2, 3.

†*Ihungia aequalis* sp. n. [Miocene] Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 2 1941 p. 141 pl. xviii f. 25.

†*Kaurnella* gen. nov. Rissoidae genotype *Kaurnella denotata* sp. nov. Plio-

cene Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. 65 1 1941.

Linemera pinguoides sp. nov. 100 fms. off Big King, Three Kings Islands, New Zealand, A. W. B. POWELL Trans. Proc. Roy. Soc. N.Z. 70 3 1940 p. 225 pl. xxx f. 7.

Lironoba anomala sp. nov. Tom Bowling Bay, Northern New Zealand, A. W. B. POWELL Trans. Proc. Roy. Soc. N.Z. 70 3 1940 p. 225 pl. xxx f. 3.

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†*Notosetia epulata* p. 141 pl. xix f. 40; *N. bucina* p. 141 pl. xviii f. 31 spp. n. [Miocene], Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 2 1941.

Omphalotropis Pfeiffer hieroglyphica Fér. "here named as type," T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 59.

†*Onoba fortis* sp. n. Canoa formation, Pliocene, Punta Blanca, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941 p. 44 pl. viii f. 3.

Orbitestella vera sp. nov. Tom Bowling Bay, Northern N.Z. in shell sand, A. W. B. POWELL Trans. Proc. Roy. Soc. N.Z. 70 3 1940 p. 223 pl. xxviii f. 4, 5.

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†*Pseudorotella lens* sp. n. Canoa formation Pliocene Punta Blanca, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941 p. 47 pl. ix f. 2.

Realiiidae based on *Realia* Gray not *Realia* of recent writers, for molluscs classed hitherto as Omphatotropids, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 59.

†*Rissoina heterolira* sp. n. [Miocene] Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 2 1941 p. 142 pl. xviii f. 35.

Scalaronoba secunda sp. nov. 73 fms. off North Cape, New Zealand, A. W. B. POWELL Trans. Proc. Roy. Soc. 70 3 1940 p. 227 pl. xxx f. 10.

†*Scalaronoba pristina* sp. n. [Miocene] Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 2 1941 p. 141 pl. xvii f. 26.

†*Scrobs praeco* sp. n. [Miocene] Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 2 1941 p. 142 pl. xviii f. 32.

Striatestea eulima sp. nov. off Spirits Bay in 32 fms., New Zealand, A. W. B. POWELL Trans. Proc. Roy. Soc. N.Z. 70 3 1940 p. 227 pl. xxx f. 2.

†*Systellomphalus* gen. nov. Vitrinellidae type *S. perornatus* sp. n. Canoa formation Pliocene, Punta Blanca, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941 p. 48 pl. ix f. 4.

Subonoba aupouria sp. nov. between Spirits Bay and Three Kings Islands in 50 fms., New Zealand, A. W. B. POWELL Trans. Proc. Roy. Soc. N.Z. 70 3 1940 p. 225 pl. xxx f. 8.

†*Teinostoma ecuadorianum* sp. n. Canoa formation Punta Blanca, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941 p. 47 pl. ix f. 1.

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†*Adelacerithium* gen. nov. Cerithiidae genotype *A. merultum* sp. nov. Pliocene Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. 65 1 1941 p. 90 pl. iv f. 23.

†*Architectonica spinogula* sp. n. [Miocene] Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 2 1941 p. 145 pl. xix f. 41, 42.

†*Architectonica* (*Discotectonica*) *squamogramma* sp. n. Balcombian, Tertiary Muddy Creek, lower beds; Victoria, E. H. CHAPPLE Mem. nat. Mus. Melbourne 12 1941 p. 123 pl. xiv f. 1, 1a.

†*Caecum pertenuis* sp. n. [Miocene] Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 2 1941 p. 143 pl. xvi f. 13.

†*Caecum* (*Quadrulata*) *campe* sp. n. Canoa formation, Pliocene, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941 p. 43 pl. x f. 7, 8.

Cerithidea obtusa, MOHR & MEER 225.

†*Cerithidea tokunagai* sp. n. Miocene Tyugoku, Japan, Y. OTUKA J. Fac. Sci. Univ. Tokyo Sect. 2 5 1939 pp. 21-45 [non vidi] [ex abstract 145 Jap. J. Geol. Geogr. 17 1-2 1940 p. 29].

†*Cerithiopsis perelongatus* sp. nov. Pliocene, Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. 65 1 1941 p. 90 pl. iv f. 25.

†*Clypeomorus bivaricatus* p. 89 pl. iv f. 20; *C. multiliratus* p. 89 pl. iv f. 22 spp. nov. Pliocene Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. 65 1 1941.

†*Cryptoptyx* ? *diversicostata* Columbia Co., Arkansas p. 273 pl. xxxix f. 6, 7; *C. ? formosa* Columbia Co., Arkansas p. 273 pl. xxxix f. 8, 9; spp. nov. Jurassic R. W. IMLAY J. Paleont. Menasha Wis. 15 3 1941.

Gazameda maoria sp. nov. between Spirits Bay and Three Kings Islands, New Zealand, A. W. B. POWELL Trans. Proc. Roy. Soc. N.Z. 70 3 1940 p. 230 pl. xxxiii f. 7.

Helicostoa sinensis and *Potadoma agglutinans* [q.v.], BEQUAERT & CLENCH 35.

†*Mathilda kaiparaensis* sp. n. [Miocene] Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. **71** 2 1941 p. 143 pl. xviii f. 36.

†*Manulona* gen. nov. Cerithiidae genotype *Manulona arrugosa* p. 91 pl. iv f. 26; with *M. lirasuturalis* p. 91 pl. iv f. 27; spp. nov. Pliocene Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. **65** 1 1941.

Maoricolpus finlayi sp. nov. off Spirits Bay, New Zealand, in 32 fms., A. W. B. POWELL Trans. Proc. Roy. Soc. N.Z. **70** 3 1940 p. 229 pl. xxxiii f. 11.

Melania libertina one of the intermediate hosts of *Paragonimus* in China, figs., K. WU 357.

Melanoides tuberculata Müll., F. G. CAWSTON 57.

Mendax duplicarinata sp. nov. between Spirits Bay and Three Kings Islands in 50 fms., New Zealand, A. W. B. POWELL Trans. Proc. Roy. Soc. N.Z. **70** 3 1940 p. 232 pl. xxix f. 4.

†*Mereldia* gen. nov. Dialidae genotype *Mereldia incommoda* sp. nov. Pliocene Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. **65** 1 1941 p. 92 pl. v f. 3.

†*Micromelania* (?) *zalaensis* sp. nov. [Miocene] Hungary, L. STRAUZ Ann. hist. nat. Mus. hung. Min. Geol. **6** 33 1940 p. 84 text-fig. 3.

†*Notoseila kaiparaensis* sp. n. [Miocene] Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. **71** 2 1941 p. 149 pl. xvii f. 23a; *N. clifdenensis* sp. n. [Miocene] Clifden, Southland, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. **71** 2 1941 p. 151 pl. xvii f. 22.

†*Obortio liratus* sp. nov. Pliocene Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. **65** 1 1941 p. 90 pl. iv f. 24.

Oncomelania schmackeri intermediate host of *Schistosoma* in China, figs., K. WU 357.

Opimilda maoria sp. nov. 140 fms. off Three Kings Islands, New Zealand, A. W. B. POWELL Trans. Proc. Roy. Soc. N.Z. **70** 3 1940 p. 230 pl. xxix f. 7.

†*Pachychilus* (*Pachychiloides*) *manselli*, *attenuatus*, figs., W. J. ARKELL 15.

†*Peverilia* gen. nov. [non descr.] of Thiaridae type *P. perisphincta* sp. nov.

Middle Purbeck, Corbula beds, Durlston Bay, Dorset, W. J. ARKELL Quart. J. Geol. Soc. London **97** 1 1941 p. 100 f. 27 (p. 98).

Potadoma agglutinans compared with *Helicostoa sinensis* another rheophilous snail, BEQUAERT & CLENCH 35.

†*Promathilda* (*Teretrina*) *microbinaria* sp. n., ? *Turritella minuta* Woodward 1895. non Koch & Dunker 1837, Middle Purbeck, Corbula beds, Durlston Bay, Dorset, W. J. ARKELL Quart. J. Geol. Soc. London **97** 1 1941 p. 103 f. 28 (p. 98).

Pseudomalaxis solaris sp. n. Sagami Bay, Japan, T. KURODA Venus **8** 1938 pp. 1-4 figs.; *P. solaris* Kuroda = *P. (Mangonua) solaris*, T. KURODA 180.

Siliquaria maoria sp. nov. 140 fms. off Three Kings Islands, New Zealand, A. W. B. POWELL Trans. Proc. Roy. Soc. N.Z. **70** 3 1940 p. 231 pl. xxxiii f. 3-5.

†*Siragimelania* subgen. nov. of *Thiara* subgenotype *Thiara* (*S.*) *tateiwa* sp. nov. Middle Cretaceous, S. Tyōsen, Japan, K. SUZUKI Japan. J. Geol. Geogr. **17** 3-4 1940 p. 216.

†*Terebralia fallax* sp. nov. Pliocene Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. **65** 1 1941 p. 91 pl. iv f. 21.

†*Thiara* (*Siragimelania*) *tateiwa* subgen. et sp. nov. pp. 216 224 pl. i [xxii] text-figs 2-16; *T. (S.) tateiwa acuticostata* subsp. nov. pp. 216, 226 pl. ii [xxiii] Middle Cretaceous, South Tyōsen, Japan, K. SUZUKI Japan. J. Geol. Geogr. **17** 3-4 1940.

†*Triphora zecollata* sp. n. [Miocene] Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. **71** 2 1941 p. 149 pl. xvii f. 21.

†*Turritella carisaensis padronesensis* "Grant & Eaton" var. nov. Miocene, N.-E. flank of Caliente Range, California, EATON, GRANT & ALLEN Bull. Amer. Ass. Petrol.-Geol. Oklahoma **25** 2 1941 p. 233 pl. i f. 9, 9a.

†*Turritella tolenasensis* sp. n. p. 62 pl. i f. 14, 15 Upper Cretaceous, lower Chico, Tolenas Grant, N. of Fairfield, California; *T. tolenasensis* subsp. n. Upper Cretaceous (Turonian), Tuscan Springs, Tehama Co., California p. 62 pl. i f. 12; *T. hearni* sp. n. p. 64 pl. i f. 1-9, Upper Cretaceous (Turonian) Siskiyou Co., California; *T. petersoni* sp. n. p. 64 pl. i f. 10, 11, Upper Cre-

taceous, Colusa Co., California; *T. chicoensis perrini* subsp. n. Chico formation (Upper Cretaceous), Santa Ana Mts., California, p. 66 pl. ii f. 1-4, 6-8; *T. packardii* sp. n. p. 64 pl. iii f. 5-8, 10-11, Chico formation (Upper Cretaceous), Santa Ana Mts., California; *T. pachecoensis waringi* p. 69 pl. vii f. 5 var. n. Paleocene, Martinez Stage, Sinei Valley, California; *T. pachecoensis renodata* var. n. p. 69 pl. iv f. 7, 8; Paleocene Martinez Stage, Sinei Valley, California; *T. pachecoensis adelaidana* subsp. n. p. 70 pl. vii f. 1-4, 6, Paleocene or late Cretaceous Adelaide quadrangle N.-W. San Luis, Opispo Co., California; *T. chaneysi*, sp. n. pp. 70, 71 pl. vi f. 1-8, higher sands of Moreno formation, late Cretaceous, Pacheco Pass, California; *T. andersoni lawsoni* var. *secundaria* n. var. Middle Eocene, Domingine stage, Sinei Valley, Aliso Canyon (West), California p. 78 pl. ix f. 9; *T. andersoni susanae* subsp. n. p. 79 pl. xi f. 6 upper part of Santa Susana shale, Moganos stage, Sinei Valley, Middle Eocene, California; *T. andersoni mulleri* subsp. n. p. 80 pl. xi f. 1-4, Middle Eocene (Domingine?) Ventura region, Mt. Pinos quadrangle, California; *T. schencki* sp. n. p. 81 pl. x f. 9, 10, Upper Eocene, Tejon formation, Tecuya Creek, Kern Co., California; *T. tejonensis* sp. n. p. 81 pl. xi f. 7; Tejon formation, Upper Eocene, Grapevine Canyon, California; *T. stocki* sp. n. p. 85 pl. xiii f. 13-16, W. side of San Joaquin Valley, California, Paleocene; *T. uvasana infera* subsp. n. p. 90 pl. xl f. 2-4, Santa Susana formation, Las Lajas Canyon section, Sinei Valley, California, Eocene; *T. uvasana aedificata* subsp. n. p. 90 pl. xvii f. 11-15, Domingine stage, Mt. Diablo region, California, Middle Eocene; *T. uvasana neopleura* var. n. p. 93 pl. xv f. 4-7, lower part of Tejon Eocene only at Live Oak Canyon, California; *T. uvasana etheringtoni* subsp. n. p. 94 pl. xv f. 12-15, Domingine, Middle Eocene, Las Lajas Canyon, Ventura Co., California; *T. uvasana chehalisensis* subsp. n. p. 94 pl. xvi f. 11-14, Upper Eocene, Cowlitz formation, Grays Harbor Co., Washington; *T. uvasana stewarti* subsp. n. p. 95 pl. xvi f. 7-9, Coal Creek, Cowlitz Co., Washington, Upper Eocene; *T. variata juliana* var. n. p. 99 pl. xix f. 10, San Julian ranch, Lower Oligocene; *T. coreyi* sp. n. p. 105 pl. xl f. 11-13, Upper

Eocene, Tejon formation, Lompoe quadrangle, California; *T. inezana pervulgata* subsp. n. p. 108 pl. xxv f. 7-11, Lower Miocene, Vaqueros formation, Bryson quadrangle, California; *T. inezana equistriata* subsp. n. p. 109 pl. xxv f. 9, 10, Lower Miocene, Santa Ynez Mts., California; *T. ocoyana topangaensis* var. n. p. 115 pl. xxx f. 1-3, 5, Middle Miocene, Temblor (Topanga) formation, Malibu Canyon, Santa Monica Mts., California; *T. cooperi paucisculpta* var. n. p. 119 pl. xxxix f. 8-10, Upper Pliocene, Santa Barbara horizon, nr. Ventura, California; *T. moodyi* sp. n. p. 121 pl. xxxiii f. 5-7, Middle Miocene, Kern R. region, California; *T. pedroensis* sp. n. p. 121 pl. xxxv f. 1-9, early Pleistocene, Los Angeles, California; *T. vanvlecki teglandae* subsp. n. p. 126 pl. xxxvii f. 4, 6-10, Middle or Lower Pliocene, Fugler Point, Gary, California; *T. vanvlecki hemphilli* sp. n. p. 126 pl. xxxvii f. 13 Pacific Beach, San Diego, California, Middle Pliocene? —fossils from Pacific Coast of N. America, C. W. MERRIAM Univ. Calif. Pub. Bnk. Dep. Geol. Sci. 26 1 1941.—*T. pescaderoensis* Arnold, considered a subsp. of *chicoensis* Gabb (p. 66), C. W. MERRIAM 220.

†*Turritella* (*Haustator*) *strangulata bisulcata* p. 13 pl. i f. 3; *T. (H.) s. alexandri* p. 13 pl. i f. 3; vars. nov. Rupelian [Oligocene] Buda Pest district, J. NOSZKY Ann. hist.-nat. Mus. hung. Min.-Geol. 33 1940.—†*T. pasada* sp. n. Canoa formation, Punta Blanca, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941 p. 42 pl. xi f. 3, 4.

Turritella communis Risso anatomy figs., C. W. MERRIAM 220.

†*Zeacruminia fluctuosa* sp. n. [Miocene] Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 2 1941 p. 149 pl. xvii f. 19.

†*Zebittium vicinum* sp. n. [Miocene], Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 2 1941 p. 148 pl. xvii f. 15.

†*Zaclys propria* sp. n. [Miocene], Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 2 1941 p. 148 pl. xvii f. 17.

Zerotula nummaria off Awanui, Doubtless Bay p. 236 pl. xxviii f. 14-15; *Z. ammonitoides* 6-10 fms. Manganui,

Doubtless Bay p. 236, pl. xxix f. 1, 2; *Z. ramosa* 75 fms. off North Cape p. 237 pl. xxix f. 3; **spp. nov.** New Zealand, A. W. B. POWELL Trans. Proc. Roy. Soc. N.Z. **70** 3 1940.

AMALTHEACEA.

†*Cheilea adelaidensis* **sp. nov.** Pliocene Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. **65** 1 1941 p. 94 pl. v f. 8, 9.

Zeradina (Rudinista) scalarina **sp. nov.** between Spirits Bay and Three Kings Islands, New Zealand, in 50 fms. A. W. B. POWELL Trans. Proc. Roy. Soc. N.Z. **70** 3 1940 p. 229 pl. xxxi f. 9.

CALYPTRAEACEA

Calyptraea fluctuosa **sp. n.** Japan, I. TAKI Venus **8** 1938 pp. 136-147 text figs. 1-10.

†*Crucibulum alloglyptum* **sp. n.** Canoa formation, Punta Blanca, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. **93** 1941 p. 45 p. vii f. 5.

Maoricrypta youngi **sp. nov.** Cape Maria van Diemen, New Zealand, A. W. B. POWELL Trans. Proc. Roy. Soc. N.Z. **70** 3 1940 p. 232 pl. xxxiii f. 12, 13.

STROMBACEA.

†*Chenopus mathiasi* **sp. n.** p. 14 pl. i f. 11; *C. mathiasi retifera* p. 14 pl. i f. 10; *C. uttingerianus ehiki* p. 15 pl. i f. 12; **vars. nov.** Rupelian [Oligocene], Buda Pest district, J. NOSZKY Ann. hist.-nat. Mus. hung. Min.-Geol. **33** 1940.

†*Pterocera (Alaria) rochatiana tergo-laevis* **var. nov.** Rupelian [Oligocene], Buda Pest district, J. NOSZKY Ann. hist.-nat. Mus. hung. Min.-Geol. **33** 1940 p. 15 pl. i f. 13.

†*Rostellaria hungarica* **sp. nov.** p. 15 pl. i f. 14; *R. hungarica gracilis* p. 16 pl. i f. 15; *R. hungarica calcarata* p. 16 pl. i f. 16; **vars. nov.** Rupelian [Oligocene], Buda Pest district, J. NOSZKY Ann. hist.-nat. Mus. hung. Min.-Geol. **33** 1940.

†*Sulcogladus collegnioi acuta* (?) *S. collegnioi elongata* (?); *S. collegnioi brevis* (?) **vars. nov.** Rupelian [Oligo-

cene], Buda Pest district, J. NOSZKY Ann. hist.-nat. Mus. hung. Min.-Geol. **33** 1940 p. 16.

NATICACEA.

Eunaticina oldroydii (Dall), behaviour in the Aquarium, W. M. INGRAM 146.

Laguncula pulchella Benson, "a doubtful group of Naticidae," T.-C. YEN 362.

Natica sulcata Born, at Peanut Island in Palm Beach Inlet, T. BAYER 34.

Polynices lewisii, J. W. MEHL 219.

LAMELLARIACEA.

†*Ellatrivia wirrata* **sp. nov.** Pliocene Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. **65** 1 1941 p. 94 pl. v, f. 16.

†*Eratopsis erro* **sp. n.** [Miocene], Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. **71** 2 1941 p. 144 pl. xix f. 37.

†*Hespererato zevitellina* **sp. n.** [Miocene], Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. **71** 2 1941 p. 144 pl. xix f. 37.

†*Trivia aequiflora* **sp. n.** [Miocene], Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. **71** 2 1941 p. 144 pl. xix f. 44 49.

CYPRAEACEA.

Cypraea tigrina accroissement, L. BERNER 36.—*C. exanthema* L, *C. e. cervus* L. at the Tortugas, T. BAYER 34.

†*Cypraea cayapa* **sp. n.** Jama formation Pliocene, Puerto Jama, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. **93** 1941 p. 41 pl. vii f. 4.

Erronea (Zoila?) teramachii, *E. (gratia-dusta?) langfordi* **spp. n.** Japan, T. KURODA Venus **8** 1938 pp. 129-153 figs. 5-7.

TONNACEA.

†*Austrotriton balcombensis* **sp. n.** Grice's Creek, near Mornington (Balcombian Tertiary), Victoria, E. H. CHAPPLE Mem. nat. Mus. Melbourne **12** 1941 p. 119 pl. xiv f. 5.

†*Cymatiella adelaidensis* **sp. nov.**
Pliocene Abattoirs bore, Adelaide,
South Australia, N. H. LUDBROOK
Trans. roy. Soc. S. Aust. **65** 1 1941 p. 94
pl. v f. 10.

†*Cythara (Margovoluta) bellardii laevis*
var. nov. Rupelian [Oligocene], Buda
Pest district, J. NOSZKY Ann. hist.-nat.
Mus. hung. Min.-Geol. **33** 1940 p. 21
pl. i f. 27.

†*Echinophoria rondoletti longinodosa*
(?) p. 19; *E. intermedia andreasi* p. 20
pl. i, f. 22; *E. intermedia retifera* (?)
p. 20; **vars. nov.** Rupelian [Oligocene]
Buda Pest district, J. NOSZKY Ann.
hist.-nat. Mus. hung. Min.-Geol. **33**
1940.

Eudolium fasciatum kiscelliensis **var.**
nov. Rupelian [Oligocene], Buda Pest
district, J. NOSZKY Ann. hist.-nat. Mus.
hung. Min.-Geol. **33** 1940 p. 22 pl. i
f. 26.

†*Ficula condita longicauda* (?) p. 22;
F. tenuis arcuato-caudata, p. 23 pl. i
f. 28; *F. tenuis effusa* p. 23 pl. i f. 29;
vars. nov. Rupelian [Oligocene], Buda
Pest district, J. NOSZKY Ann. hist.-
nat. Mus. hung. Min.-Geol. **33** 1940.

†*Galeodea sconcoidea luisae* **var. nov.**
p. 17 pl. i f. 18; *G. echinophora marga-*
rethae **var. nov.** p. 17 pl. i f. 17; *G.*
echinophora clarae, **var. nov.** p. 17 pl. i
f. 19; *G. taurinensis helenae* **var. nov.**
p. 18 pl. i f. 21; Rupelian [Oligocene],
Buda Pest district, J. NOSZKY Ann.
hist.-nat. Mus. hung. Min.-Geol. **33**
1940; †*G. ogawarensis* **sp. nov.** Upper
Miocene or Lower Pliocene Hukuda,
Ogawara-mati, Sibata-gun, Japan,
NOMURA & ÔNISI Jap. J. Geol. Geogr.
17 3-4 1940 p. 188 pl. xix f. 5 a-b.

†*Ranella (Apollon) gigantea rarino-*
dosa (?) p. 23; *R. (A.) gigantea budensis*
p. 24 pl. i f. 30; *R. (A.) semilaevis*
simplex (?) p. 24; **vars. nov.** Rupelian
[Oligocene], Buda Pest district, J.
NOSZKY Ann. hist.-nat. Mus. hung.
Min.-Geol. **33** 1940.

†*Triton tudiclaeformis* p. 24 pl. i
f. 23; *T. euthriaeformis* p. 25, pl. i f. 24;
spp. nov. Rupelian [Oligocene], Buda
Pest district, J. NOSZKY Ann. hist.-
nat. Mus. hung. Min.-Geol. **33** 1940.

PTENGLOSSA.

EPITONIACEA.

Acis pseudopareora **sp. nov.** 6-10
fms. off Mangonui, Doubtless Bay, New

Zealand, A. W. B. POWELL Trans. Proc.
Roy. Soc. N.Z. **70** 3 1940 p. 236 pl. xxxi
f. 6.

Cirsotrema commutata recorded from
shore of the R. Deben, Suffolk, C.
MORLEY **234**.

Epitonium (Nitidoscala) tinctum **var.**
bornanni [**var. nov.**], Mission Bay, San
Diego, A. M. STRONG Naut. Philad. **55**
2 1941 p. 47; *E. humphreysii* from
South Cape, May beach, New Jersey,
R. C. ALEXANDER **5**; *E. (Nitidoscala)*
tinctum (Carpenter) *subcoronata* Carp.
a subsp., A. M. STRONG **316**.

†*Epitonium (Ferminoscala) mana-*
bianum **sp. n.** Punta Blanca beds, p. 37
pl. ii f. 3; *E. (Ferminoscala) eleutherium*
p. 38 pl. ii f. 7; *E. (Spiniscala) lori-*
panum p. 38 pl. ii f. 9 **spp. n.** Canoa
formation Punta Blanca, Pliocene,
Western Ecuador, PILSBRY & OLSSON
Proc. Acad. nat. Sci. Philad. **93** 1941.

†*Kaiparathina* **gen. nov.** [Ianthinidae]
type *K. praecellens* **sp. n.** [Miocene]
Pakaurangi Point, Kaipara, New
Zealand, C. R. LAWS Trans. Proc. Roy.
Soc. N.Z. **71** 2 1941 p. 145 pl. xix f. 38.

†*Sthenorytis caroli* Oligocene deposits
of Nazareno, Havana p. 307, text-fig.
1-3; *S. torrei* Miocene formation near
Matanzas p. 307 text-fig. 1-3 **spp. nov.**
Cuba, P. BARTSCH J. Paleont. Menasha
Wis.

PYRAMIDELLACEA.

Balcis pervegrandis 23 fms. off
Ahipara, New Zealand p. 233 pl. xxxi
f. 1; *B. maoria* Cape Maria van Diemen
Island p. 234, pl. xxxi f. 2; **spp. nov.**
New Zealand, A. W. B. POWELL Trans.
Proc. Roy. Soc. N.Z. **70** 3 1940.

†*Balcis lentocontracta* p. 147, pl. xviii
f. 34; *B. (Vitrolina) waiaotea* p. 147
pl. xvi f. 8; **spp. n.** [Miocene] Pakau-
rangi Point, Kaipara, New Zealand,
C. R. LAWS Trans. Proc. Roy. Soc.
N.Z. **71** 2 1941.

Besla waitangiensis Waitangi, Chat-
ham Islands p. 12 f. 15; *B. rossiana*
Auckland Islands 95 fms. p. 13 pl. i
f. 4; **spp. nov.**, C. R. LAWS Trans. Proc.
Roy. Soc. N.Z. **71** 1 1941.

Chileutomia neozelanica **sp. nov.** be-
tween Spirits Bay and Three Kings
Islands, in 50 fms., New Zealand, A. W.
B. POWELL Trans. Proc. Roy. Soc. N.Z.
70 3 1940 p. 235 pl. xxxi f. 5.

†*Egila arcuata* sp. nov. Tertiary Shell-bed Target Gully, Oamaru, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 1 1941 p. 14 pl. i f. 2.

†(?)*Elodiamea eocenica* sp. nov. Tahuian Greensands, McCullough's Bridge, Waihao (Tertiary), New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 1 1941 p. 18 pl. ii f. 18.

Eulima mangonui sp. n. off Mangonui Heads in 6 fms., Doubtless Bay, New Zealand, A. W. B. POWELL Trans. Proc. Roy. Soc. N.Z. 70 3 1940 p. 234 pl. xxxi f. 3, 4.

†*Eulima longiconica* p. 93 pl. v f. 4; *E. minuticonica* p. 93 pl. v f. 5; spp. nov. Pliocene Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. 65 1 1941.

Evalea plana Snares Islands 50 fms. p. 21 pl. ii f. 17; *E. propria* Dunedin Harbour p. 22 pl. ii f. 24; spp. nov., New Zealand C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 1 1941.

Ividella maoria sp. nov. between Spirits Bay and Three Kings Islands, New Zealand, in 50 fms., A. W. B. POWELL Trans. Proc. Roy. Soc. N.Z. 70 3 1940 p. 233 pl. xxix f. 5.

†*Levipyrghulina* gen. nov. Pyramidellidae type *Levipyrghulina sulcata* sp. nov. Hachinsonian (Tertiary) Clifden, Southland "bands 6A" p. 17 pl. ii f. 23; *L. marginata* shell beds, Target Gully, Oamuru p. 17 pl. i f. 6; spp. nov. Tertiary, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 1 1941.

Linopyrga gen. nov. Pyramidellidae type *Odostomia rugata* Hutton, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 1941 p. 6, 7.—*L. rugata parva* subsp. nov. Takapuna, Auckland in 4–6 fms. C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 1 1941 p. 9 pl. i f. 8.

†*Linopyrga junior* Clifden Southland "band 6C" p. 9 f. 22; *L. sanguis* Clifden Southland "band 7A," p. 10 f. 9 spp. nov. Tertiary, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 1 1941.

Obexomia nom. nov. for *Obex* LAWS Trans. Roy. Soc. N.Z. 70 p. 155 1940 (non Iredale Rec. Aust. Mus. 14 p. 259 1925), Genotype *Odostomia denselirata*

Suter and associates with it *Obex granum* LAWS, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 1 1941 p. 22 Appendix.

†*Pukenria* gen. nov. pp. 6, 10, Pyramidellidae type *Pukenria anaglypta* sp. nov. Pukeriri, near Oamaru Tertiary p. 11 pl. ii f. 25, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 1 1941.

†*Pyrgulina latocorrugata* sp. n. Tertiary, Clifden, Southland "bands 4 and 6A," C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 1 1941 p. 13 pl. i f. 3.

Siogamaia morioria sp. nov. Waitangi, Chatham Island, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 1 1941 p. 19 pl. i f. 11.

†*Syrnola acrisecta* sp. nov. Pliocene Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. 65 1 1941 p. 92 pl. v f. 2.

†? *Terelimella pravitas* sp. n. [Miocene] Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 2 1941 p. 146 pl. xix f. 47.

†*Turbonilla vixcostata* p. 92 pl. v f. 6; *T. subfusca* p. 93 pl. v f. 7; spp. nov. Pliocene Abattoirs bore, South Australia N. H. LUDBROOK Trans. roy. Soc. S. Aust. 65 1 1941.—†*T. (Mormula) loripana* sp. n. Canoa formation, Pliocene, Punta Blanca, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941 p. 39 pl. x f. 3–5.

Venustilifer secunda sp. nov. off Three Kings Islands in 140 fms., New Zealand, A. W. B. POWELL Trans. Proc. Roy. Soc. N.Z. 70 3 1940 p. 235 pl. xxix f. 6.

†*Waikura circumdata* Awamoan (Tertiary) White Rock River, South Canterbury p. 15 pl. i f. 5; *W. hawera* Waitotaran (Tertiary), Hamera p. 16 pl. i f. 13; *W. finlayi* Tertiary Sandstone, Trig. Mangaotero; spp. nov., New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 1 1941.

STENOGLOSSA.

(a) RHACHIGLOSSA.

MURICACEA.

†*Boreotrophon stuarti* *cierboensis* "Grant and Eaton" var. nov. early upper Cierbo Miocene, California, EATON, GRANT & ALLEN Bull. Amer. Ass. Petrol. Geol. Oklahoma 25 2 1941 pl. ii f. 4.

†*Coralliophila turneri* sp. n. [Miocene] Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. **71** 2 1941 p. 150 pl. xvii f. 16.

†*Harmatia* subgen. nov. [non des.] of *Murex* for *Murex* (*Harmatia*) *stephani* sp. nov. Rupelian [Oligocene], Buda Pest district, J. NOSZKY Ann. hist.-nat. Mus. hung. Min.-Geol. **33** 1940 p. 28 pl. ii f. 4.

Lepsia haustrum Martyn breeding habits, fig., D. H. GRAHAM 109.

Lepsiella scobina Q. & G. breeding habits, fig., D. H. GRAHAM 109.

Lepsithais lacunosa (Brug.) breeding habits, fig., D. H. GRAHAM 109.

Murex trunculus experiments, JULIEN & BONNET 164.

†*Murex peramangus* sp. nov. Pliocene, Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. **65** 1 1941 p. 95 pl. v f. 24.—†*M. guembeli longispina* p. 27 pl. i f. 31; *M. (Haustellum) sismondiae rarivaricosa* (?) p. 27; *M. (Phyllonotus) rudis michelottii* p. 28 pl. i f. 32; *M. (Pteronotus) detritus venzoi* p. 28 pl. ii f. 2; *M. (Pteronotus) detritus bellardii* p. 28 pl. ii f. 1; vars. nov.: *M. (Alipurpura) holocristatus* sp. nov. p. 28 pl. ii f. 3; *M. (Harmatia) stephani* sp. nov. p. 28 pl. ii f. 4; Rupelian [Oligocene], Buda Pest district, J. NOSZKY Ann. hist. nat. Mus. hung. Min.-Geol. **33** 1940.

Neothais scalaris (Menke) breeding habits, fig., D. H. GRAHAM 109.

Ocenebra erinacea genital ducts, figs., V. FRETTER 97.

Sulfurina cerinella sp. nov. Taland Islands, W. S. S. v. B. JUTTING Treubia, Buitenzorg **18** 1941 p. 5 fig. la-f. 2.

†*Trophon* (*Enatimene*) *makros* p. 122 pl. xiv f. 6; *T. (E.) crassiliratus* p. 123 pl. xiv f. 7; spp. nov. Landslide about three-quarters of a mile W. of the Gellibrand River, and about the same distance from the beach, Princetown district, Victoria, E. H. CHAPPLE Mem. nat. Mus. Melbourne **12** 1941.—†*T. gillulyi* "Grant & Eaton" sp. n. mid upper Cierbo, Miocene California pl. ii f. 6; *T. clarki cuyamanus* "Grant & Eaton" var. nov. lower Neroly, Miocene California pl. ii f. 7; *T. carisaensis mirandaensis* "Grant & Eaton" var. nov. early upper Neroly, Miocene Cali-

fornia, EATON, GRANT & ALLEN Bull. Amer. Ass. Petrol. Geol. Oklahoma **25** 2 1941 pl. ii f. 8.

Urosalpinx cinerea sex-ratio, H. A. COLE **66**.—*U. c.* Say, infested by *Hoploplana*, L. A. STAUBER **369**.—*U. c.*, figs., I. R. TOMKINS **332**.

†*Widningia* gen. nov. Muricidae genotype *Widningia crassiplicata* sp. nov. Pliocene Abattoirs bore, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. **65** 1 1941 p. 95 pl. v f. 25.

†*Xymenella protocarinata* sp. n. [Miocene] Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. **71** 2 1941 p. 148 pl. xix f. 45.

Zeatrophon ambiguus (Phil.) breeding habits, fig., D. H. GRAHAM 109.

BUCCINACEA.

†*Ademitrella* gen. nov. Pyrenidae genotype *Ademitrella insolentior* sp. nov. Pliocene, Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. **65** 1 1941 p. 96 pl. v f. 11.

Aesopus (*Glyptaesopus*) *perornatus* p. 36 pl. x f. 1, 2; *A. (G.) polylophus* p. 37 pl. x f. 6; spp. n. Pliocene Canoa formation, Punta Blanca, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. **93** 1941.

†*Amphissa meridionalis* sp. n. Pliocene Puna Island, Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. **93** 1941 p. 36 pl. ii f. 6.

†*Ancistrolepis tricordatus* sp. nov. Neogene Sennan District, Miyagi Prefecture, Japan, NOMURA & ONISI Jap. J. Geol. Geogr. **17** 3-4 1940 p. 185 pl. xvii f. 1.

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Argobuccinum tumidum (Dunker) breeding habits fig., D. H. GRAHAM 109.

†*Babylonia kozaiensis* sp. n. Miocene Yamagati, Kozai-mura, N.E. Honsyu, Japan, S. NOMURA Jour. Geol. Soc. Jap. **46** 1939 pp. 252-257.

Buccinulum (*Evarnula*) *multilineum aoupouria* subsp. nov. Taupo Bay, Whangaroa p. 238 pl. xxxiii f. 16;

B. (E.) mariae **sp. nov.** Cape Maria van Diemen Island, Northern N.Z., p. 238 pl. xxxiii f. 1, 2, New Zealand Mollusca, A. W. B. POWELL Trans. Proc. Roy. Soc. N.Z. 70 3 1940.

Buccinum undatum genital ducts, figs., V. FRETTER 97.—*B. u.* boring habits and method; Oesophagus, figs., A. GRAHAM 108.—*B. leucostoma*, R. TIBA 330.

Busycon, inorganic constituents in blood and muscle, HAYES & PELLUET 126.—*B. perversum*, I. R. TOMKINS 332.

†*Cantharus elegans avus* **subsp. nov.** Pliocene Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941 p. 34 pl. vi f. 8, 9.

†*Clavella vighi* **sp. nov.** Rupelian [Oligocene] Buda Pest district, J. NOSZKY Ann. hist.-nat. Mus. hung. Min.-Geol. 33 1940 p. 32 pl. ii f. 10.

Cominella (Cominula) youngi **sp. nov.** Cape Maria van Diemen Island, Northern New Zealand, A. W. B. POWELL Trans. Proc. Roy. Soc. N.Z. 70 3 1940 p. 239 pl. xxxiii f. 9, 10.—*C. maculosa* Martyn, *C. glandiformis* Rve, breeding habits, fig., D. H. GRAHAM 109.

†*Cymatophos* **gen. nov.** Nassariidae type *C. galerus* **sp. n.** Jama formation, Jama Bay, Pliocene Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941 p. 33 pl. iv f. 5, 7.

Fasciolaria giants, H. A. PILSBRY 259.

†*Fasciolaria jablonszkyi* **sp. nov.** Rupelian [Oligocene] Buda Pest district, J. NOSZKY Ann. hist.-nat. Mus. hung. Min.-Geol. 33 1940 p. 32 pl. ii f. 7.

†*Fusus pergracilis crassa* **var. nov.** p. 29 pl. ii f. 5; *F. wenzi* **sp. nov.** p. 30 pl. ii f. 6; *F. retrorsicosta longicauda* ? **var. nov.** p. 51; Rupelian [Oligocene] Buda Pest district, J. NOSZKY Ann. hist.-nat. Mus. hung. Min.-Geol. 33 1940.

Glyptaesopus **subgen. nov.** of *Aesopus* [q.v.], Columbellidae, type *Aesopus xenicus* Pilsbry & Lowe, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941 p. 36.

†*Hanetia ecuadorensis* p. 28 pl. iv f. 10, 11; *H. cymiodes* p. 28 pl. v f. 1;

spp. n. Jama formation Puerto Jama; *H. boggsi* p. 28 pl. v f. 3, 4 **sp. n.** Canoa formation, Punta Blanca: Pliocene Mollusca, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941.

†*Hindsia wheeleri* **sp. n.** Canoa formation, Pliocene Punta Blanca, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941 p. 29 pl. v f. 10.

†*Latirus cognatus rarilamellosa* **var. nov.** Rupelian [Oligocene] Buda Pest district, J. NOSZKY Ann. hist.-nat. Mus. hung. Min.-Geol. 33 1940 p. 33 pl. ii f. 9.

†*Latrunculus (Peridipsaccus) caronis multisulcata* **var. nov.** Rupelian [Oligocene] Buda Pest district, J. NOSZKY Ann. hist.-nat. Mus. hung. Min.-Geol. 33 1940 p. 26 pl. i f. 25.

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Macrozafra mariae Cape Maria van Diemen p. 242 pl. xxxii f. 6; *M. enwrighti* off North Cape in 60 fms. p. 242 pl. xxxii f. 5; **spp. nov.** New Zealand, A. W. B. POWELL Trans. Proc. Roy. Soc. N.Z. 70 3 1940.

†*Nassa tinosa* p. 29 pl. vi f. 6, 7, Jama formation Puerto Jama; *N. palta* p. 30 pl. vi f. 4, 5, Punta Blanca beds; *N. cara* p. 30 pl. vi f. 1, 2 Canoa formation, Punta Blanca; *N. (Perunassa) ecuadoriana* p. 31 pl. iv f. 2, 8, 11, Punta Blanca beds; *N. puntablancana* p. 32 pl. v f. 5, 11; **spp. n.** Pliocene Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941.

Nassarius reticulatus genital ducts, figs., V. FRETTER 97.

Neptunea Röding type, ANON 12.

†*Neptunea stonei* Pils. from South Cape May beach, New Jersey, R. C. ALEXANDER 5.—*N. hukushimensis* Nomura & Hatai, HATAI & NISIIYAMA 123.

Nucella lapillus genital ducts, figs., V. FRETTER 97.—*N. l.* oesophagus and method of boring, figs., A. GRAHAM 108.

Pyrene mercatoria L. on Garden Key, Dry Tortugas, T. BAYER 34.

†*Siphonalia spadiceoides* sp. n. Miocene, Yamagati, N.E. Honsyu, Japan, S. NOMURA Jour. Geol. Soc. Jap. 46 1939 pp. 252-257.

†*Strombina ecuadoriana* sp. n. Jama formation, Puerto Jama Pliocene, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941 p. 35 pl. v f. 7, 8.

†*Strombinophos* gen. nov. Columbelloidea p. 35, type *Strombinophos lori-panus* sp. n. p. 36 pl. iv f. 6, 9, Canoa formation, Pliocene Punta Blanca, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941.

Taron mouatae sp. nov. Devonport Auckland, New Zealand, A. W. B. POWELL Trans. Proc. Roy. Soc. N.Z. 70 3 1940 p. 237 pl. xxxiii f. 6.

†*Tritiaria* (?) *ecuadoriana* sp. n. Canoa formation, Punta Blanca, Pliocene, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941 p. 34 pl. vi f. 3.

†*Verconella bartrumi* sp. n. [Miocene] Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 2 1941 p. 147 pl. xvii f. 19.

Zemitrella fallax Tom Bowling Bay, Northern New Zealand in shellsand p. 240 pl. xxxii f. 3; *Z. attenuata* off Three Kings Islands in stomach of fish, p. 240 pl. xxxii f. 4; *Z. regis* off Three Kings Islands in 140 fms., p. 240 pl. xxxii f. 1; *Z. laevirostris* Tom Bowling Bay, Northern N.Z. p. 241 pl. xxxii f. 2; spp. nov. New Zealand, A. W. B. POWELL Trans. Proc. Roy. Soc. N.Z. 70 3 1940.

†*Zemitrella muscula* sp. nov. Pliocene Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. 65 1 1941 p. 96 pl. v f. 12.

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Alcihoë arabica Martyn breeding habits, fig., D. H. GRAHAM 109.

†*Austromitra angusticostata* sp. nov. Pliocene, Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. 65 1 1941 p. 96 pl. v f. 13.

†*Bathytoma adelaidensis* sp. nov. Pliocene, Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. 65 1 1941 p. 97 pl. v f. 17.

†*Cancellaria muratana* sp. nov. Neogene, Sennan District, Miyagi Prefecture, Japan, NOMURA & ÔNISI Jap. J. Geol. Geogr. 17 3, 4 1940 p. 185 pl. xvii f. 14.—†*C. (Cancellaria) yolandia* p. 21 pl. iv f. 3 Jama formation, Punta Borracho; *C. (C.) jipijapana* p. 22 pl. iv f. 1, 4 Punta Blanca beds; *C. (C.) doloides* p. 22 pl. iii f. 5, Canoa formation, Punta Blanca; *C. (C.) cominella* p. 23 pl. iii f. 7, Canoa formation, Punta Blanca; *C. (Euclia) pacifica* p. 23 pl. iii f. 4, Jama formation, Puerto Jama; *C. (Euclia) harpiformis* p. 23 pl. iii f. 1, 2, Canoa formation, Punta Blanca; *C. (Tribia) bahia* p. 24 pl. iii f. 3, Canoa formation, Punta Blanca; *C. (Narona) pajana* p. 25 pl. iii f. 6, Canoa formation, Punta Blanca; spp. nov. Pliocene, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941.

†*Harpa bellardii madachi* var. nov. Rupelian [Oligocene], Buda Pest district, J. NOSZKY Ann. hist.-nat. Mus. hung. Min.-Geol. 33 1940 p. 34 pl. ii f. 11.

†*Inquisitor detritus* sp. nov. Pliocene Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. 65 1 1941 p. 98 pl. v f. 18.

†*Lora viridula kurodai* subsp. n. *L. nipponensis* sp. n. *L. kakumensis* sp. n. *L. nakamurai* sp. n. Tertiary Japan, T. ONOYAMA Venus 8 1939 pp. 71, 80 figs.

†*Lyria taurinia mitraeformis* var. nov. p. 35 pl. ii f. 12; *L. collaris* sp. nov. p. 35 pl. ii f. 13; *L. collaris szontaghi* var. nov. p. 35 pl. ii f. 14; Rupelian [Oligocene], Buda Pest district, J. NOSZKY Ann. hist.-nat. Mus. hung. Min.-Geol. 33 1940.

†*Mappingia* gen. nov. Turridae genotype *Mappingia acutispira* sp. nov. Pliocene, Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. 65 1 1941 p. 99 pl. v f. 21.

Marginella hartleyana sp. nov. dredged off Santa Rosa Island, N.W. Florida, J. S. SCHWENGL Naut. Philad. 55 2 1941 p. 65 pl. iii f. 6, 7.

†*Marginella moana* sp. nov. Pliocene Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. 65 1 1941 p. 97 pl. v f. 15.

Mitra florida Gould pl. v f. 18, from Dry Tortugas and lower Florida Keys, T. BAYER 34.

†*Mitra* (*Tiara*) *gigantea polystira* subsp. nov. Canoa formation, Pliocene, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941 p. 27 pl. ii f. 4.

Oliva biplicata abnormal, D. S. and E. W. GIFFORD 102.—†*Oliva* (*Olivella*) *inflata elongatula* (?) var. nov. Rupelian [Oligocene], Buda Pest district, J. NOSZKY Ann. hist.-nat. Mus. hung. Min.-Geol. 33 1940 p. 40.

Olivella biplicata colour variation, D. S. & E. W. GIFFORD 101.

†*Trigonostoma ecuadoriana* sp. n. Canoa formation, Pliocene, Punta Blanca, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941 p. 25 pl. iii f. 8, 9; pl. v f. 2.

†*Tudicla sinotecta* sp. nov. Pliocene Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. 65 1 1941 p. 97 pl. v f. 14.

†*Voluta suturalis undulato-collaris* (?) var. nov. p. 34 Rupelian [Oligocene], Buda Pest district, J. NOSZKY Ann. hist.-nat. Mus. hung. Min.-Geol. 33 1940.

†*Volutilithes apenninica irregularis* var. nov. p. 35 pl. ii f. 15; *V. rotaridesi* sp. nov. p. 36 pl. ii f. 16; *V. multicostrata krepuskai* var. nov. p. 36 pl. ii f. 17; *V. elevata laevis* (?) var. nov. p. 36; *V. intercostaeiliata* sp. nov. p. 36 pl. ii f. 18; *V. (Athleta) pygmaea tenerinodosa* (?) var. nov. p. 37; *V. (Athleta) consanguinea szekessyi* var. nov. p. 37 pl. ii f. 19; *V. (Neoathleta) affinis effusa* (?) var. nov. p. 38; *V. (N.) affinis wagneri* var. nov. p. 38 pl. ii f. 20; *V. (N.) obliqua gracilior* (?) var. nov. p. 39; *V. (N.) obliqua altispirata* var. nov. p. 39 pl. ii f. 21; Rupelian [Oligocene], Buda Pest district, J. NOSZKY Ann. hist.-nat. Mus. hung. Min.-Geol. 33 1940.

Zeadmète finlayi off North Cape, in about 60 fms. p. 242 pl. xxix f. 12; *Z. aoupouria* 140 fms. off Three Kings Islands p. 243 pl. xxix f. 13; spp. nov. New Zealand, A. W. B. POWELL Trans. Proc. Roy. Soc. N.Z. 70 3 1940.

STENOGLOSSA.

(b) TOXOGLOSSA.

CONACEA.

†*Austrodrillia trucidata* p. 98 pl. v f. 20; *A. decemcostata* p. 98 pl. v f. 19; spp. n. Pliocene Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. 65 1 1941.

Canetoma gen. nov. p. 6, Turridae type *C. tersa* sp. n. Japan Sea p. 12 pl. i f. 10, P. BARTSCH Proc. biol. Soc. Washington 54 1941.

Cestoma sub. gen. nov. p. 5 of *Funitoma* Turridae type *Funitoma* (*C.*) *eurybia* sp. n. Soujet Harbour, Japan Sea p. 9 pl. i f. 5, P. BARTSCH Proc. biol. Soc. Washington 54 1941.

†*Clathrodrillia noventa* p. 17 pl. ii f. 5; *C. woodringi* p. 19 pl. ii f. 8; spp. n. Canoa formation, Punta Blanca Pliocene, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941.

†*Clathurella* (*Glyphostoma*) *tridesmia* sp. nov. Lower Pleistocene Hilltop Quarry, San Pedro, California, S. S. BERRY Bull. Amer. Paleont. Ithaca 27 101 1941 p. 8 pl. i f. 3.

Conus echinulatus Kiener Hillsborough Inlet, Florida, T. BAYER 34.

†*Crassispira guayana* sp. n. Jama formation (Pliocene) Puerta Jama, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941 p. 19 pl. ii f. 2.

Curtitoma gen. nov. p. 6, Turridae type *C. hecuba* sp. n. Japan Sea p. 10 pl. i f. 3, P. BARTSCH Proc. biol. Soc. Washington 54 1941.

†*Daphnella franciscæ* sp. nov. Rupelian [Oligocene], Buda Pest district, J. NOSZKY Ann. hist.-nat. Mus. hung. Min.-Geol. 33 1940 p. 43 pl. ii f. 22.

†*Dolichotoma subdenticulata reticulata* var. nov. p. 34 pl. ii f. 23; *D. collaris* sp. nov. p. 44 pl. ii f. 24; *D. collaris nudata* (?) var. nov. p. 44; Rupelian [Oligocene] Buda Pest district, J. NOSZKY Ann. hist.-nat. Mus. hung. Min.-Geol. 33 1940.

†*Etrema turrita* sp. n. Balcombian Tertiary spoil heap at brown coal mine, Altona, E. H. CHAPPLE Mem. nat.

Mus. Melbourne 12 1941 p. 120 pl. xiv f. 3.—†*E. peramoena* sp. nov. Pliocene, Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. 65 1 1941 p. 99 pl. v f. 23.

Eubella [*Eubela* ?] *nipponica* sp. n. Sagami Bay, Japan, T. KURODA Venus 8 1938 pp. 1-4 figs.

†*Filodrillia turrita* sp. n. Balcumbian, Tertiary spoil heap at brown coal mine, Altona, nr. Williamstown, E. H. CHAPPLE Mem. nat. Mus. Melbourne 12 1941 p. 121 pl. xiv f. 4.

Funitoma gen. nov. p. 5, Turridae type *Funitoma areta* sp. n. Japan Sea, p. 8 pl. i f. 8, P. BARTSCH Proc. biol. Soc. Washington 54 1941.

Granotoma gen. nov. p. 5, Turridae type *G. krausei* (Dall) = *Bela krausei* Dall pl. i f. 9, P. BARTSCH Proc. biol. Soc. Washington 54 1941.

†*Guraleus subnitidus* sp. nov. Pliocene, Abattoirs bore, Adelaide, South Australia, N. H. LUDBROOK Trans. roy. Soc. S. Aust. 65 1 1941 p. 99 pl. v f. 22.

†*Lithoconus ineditus parvispira* (?) var. nov. p. 48; *L. ineditus acuticaudata* (?) var. nov. p. 48 Rupelian [Oligocene], Buda Pest district, J. NOSZKY Ann. hist.-nat. Mus. hung. Min.-Geol. 33 1940.

†*Mangelia ecuadoriana* p. 20 pl. ix f. 9; *M. heptapleura* p. 20 pl. ix f. 5; *M. hesperia* p. 20 pl. ix f. 6; spp. n. Canoa formation (Pliocene) Punta Blanca, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941.

Micantapex angustatus 26 fms. off Waikuku Beach, North Cape, N.Z. p. 245 pl. xxxi f. 7; *M. finlayi* 110 fms. off Great Barrier Island p. 245, spp. nov. New Zealand, A. W. B. POWELL Trans. Proc. Roy. Soc. N.Z. 70 3 1940.

†*Mitromorpha barbarensis woodfordi* subsp. nov. p. 10 pl. i f. 4; *M. galeana* sp. nov. p. 12; Lower Pleistocene, Hilltop Quarry, San Pedro, California, S. S. BERRY Bull. Amer. Paleont. Ithaca 27 101 1941.

†*Mitriothara megale* sp. n. Barwonian, Tertiary, Beach Cliffs 2½ miles west of the Gellibrand River, E. H. CHAPPLE Mem. nat. Mus. Melbourne 12 1941 p. 121 pl. xiv f. 2.

†*Moniliopsis chacei* sp. nov. Lower Pleistocene, Hilltop Quarry, San Pedro, California, S. S. BERRY Bull. Amer. Paleont. Ithaca 27 101 1941 p. 6 pl. i f. 2.

†*Nannodiella meridionalis* sp. n. Canoa formation (Pliocene) Punta Blanca, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941 p. 20 pl. ix f. 7, 8.

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Micrarionta (? *Erëmarionta*) *chacei* sp. n. among rocks on S.E. side of highway S. of highway bridge lower end of El Tigre Canyon 9 m. N. of Ensenada, Lower California, Mexico, G. WILLETT Bull. S. Calif. Acad. Sci. 39 1 1940 p. 81 pl. xii.

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Striatura (*Pseudohyalina*) *discus* sp. nov. East Maui (Makawao), Hawaiian Islands, H. B. BAKER Bull. Bishop Mus. Honolulu 166 1941 p. 326 pl. xl f. 7-9.

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Chronoceryx gen. nov. Durgellinidae [sp. only des.] type *Sitala* ? *sublimis* Hedley Mt. Scratchley, Papua, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 67.

Coneuplecta (s.s.) *turrita palauensis* subsp. nov. Auluptagel, Palau, H. B. BAKER Bull. Bishop Mus. Honolulu 116 1941 p. 237 pl. lxii f. 14; pl. lv f. 7, 8; pl. xlii f. 12, 13.

Corneoxesta subgen. nov. [non des.] type *Xesta dubava nubilissinus* subsp. nov., T. IREDALE Aust. Zool. Sydney 10 1 1941.

Cotitrochus subgen. nov. pp. 285, 286 of *Trochomorpha* type *Helix eurydice* Gould Ena p. 313 pl. lxiii f. 6; pl. lvii f. 10, 11; pl. li f. 1, 2, H. B. BAKER Bull. Bishop Mus. Honolulu 166 1941.

Dendrotrochus (*Ponapea*) *ponapensis* sp. nov. Ponape (Kiti district), Caroline Islands, H. B. BAKER Bull. Bishop Mus. Honolulu 116 1941 p. 257, pl. lxxv f. 1; pl. lv f. 11, 12; pl. xlii f. 3-7.

Desidarium dispositus gen. sp. nov. Barrington Tops, N.S.W., T. IREDALE Aust. Nat. Sydney 11 1 1941 p. 8.

Ellarion gen. nov. Helicarionidae type *Helicarion visi* Hedley Basilaki (=Moresby) Is., T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 66.

Euconulus (*Monoconulus*) *conoides* sp. n. Tahiti, Society Islands p. 214 pl. lxii f. 15; pl. liii f. 7, 8; pl. xliii f. 8, 9; *E. (Nesoconulus) subtilissimus kaunakakai* subsp. nov. Molokai Hawaiian Islands p. 217 pl. lxii f. 3; pl. liii f. 5, 6; *E. (Nesoconulus) gaetanovi vivens* subsp. nov. Hawaii (S. Hilo) p. 218 pl. lxii f. 9; pl. liii f. 9, 10; pl. xliii f. 5; *E. (Chetosyna) thurstoni* sp. n. Hawaii (N. Kona ?) p. 219 pl. lxii f. 12; pl. liii f. 11, 12, H. B. BAKER Bull. Bishop Mus. Honolulu 116 1941.

Expocystis exclusus sp. nov. Broken Bay, N.S.W., T. IREDALE Aust. Nat. Sydney 11 1 1941 p. 4.

Geodiscus gen. nov. Geotrochidae type *Helix lomonti* Brazier Yule Is., T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 72.

Habroconus (*Cocoslens*) *pallidus* sp. nov. Cocos Island, H. B. BAKER Bull. Bishop Mus. Honolulu 166 1941 p. 224 pl. lx f. 10-12; pl. xlii f. 3-4.

Helicarion porrectus sp. n. Blackheath, N.S.W., *H. mastersi callidus* subsp. nov. Twofold Bay, T. IREDALE Aust. Nat. Sydney 11 1 1941 p. 6. *H. (Pelo-*

parion) cumbezi, Maruia Springs, Lewis Pass, Nelson p. 262 pl. li f. 6-8; *H. (s.l.) oconnori* Anatoki Forks, 2,500 ft. West Nelson p. 264 pl. li f. 3-5 spp. nov. New Zealand A. W. B. POWELL Rec. Auckland Inst. Mus. 2 5 1941.

Hunsteinia gen. nov. Ariophantidae type *Oxytes hercules* Hedley, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 71.

Kuroria gen. nov. Euconulinae, Helicarionidae, type *Microcystis palaensis* Semper 1870, Reisen from Koror, Palau, H. B. BAKER Bull. Bishop Mus. Honolulu 116 1941 p. 220 pl. liii f. 13-15; pl. xliii f. 10-12.

Lauhala subgen. nov. pp. 285, 286 of *Trochomorpha* type *T. (L.) troilus savaii* subsp. nov. p. 310 pl. lvii f. 12, 13; pl. l, f. 17, 18, H. B. BAKER Bull. Bishop Mus. Honolulu 166 1941.

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Ludificator subgen. nov. pp. 285, 286 of *Trochomorpha* type *Helix apia* Hombron & Jaquinot Tutuila p. 311 pl. lxiii f. 7; pl. lvii f. 14, 15; pl. l f. 19-21, H. B. BAKER Bull. Bishop Mus. Honolulu 166 1941.

Mistarion gen. nov. Helicarionidae type *Helicarion musgravei* Hedley Doura, west of Port Moresby, Papua, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 66.

Mysticarion gen. nov. non des. *M. leucospira insuetus* subsp. n. N.S.W., T. IREDALE Aust. Nat. Sydney 11 1 1941 p. 7.

Necoidena gen. nov. p. 72 Geotrochidae type *N. froggatti* sp. n. Fly River, recorded by Hedley as *Trochomorpha planorbis* Lesson, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 73 pl. iii f. 8.

Nitor subrugatus helmsianus subsp. nov. New South Wales, T. IREDALE Aust. Nat. Sydney 11 1 1941 p. 3.

Orpiella (*Halozonites* ?) *proxima* sp. nov. Viti Levu, Fiji p. 242 pl. lvi f. 4-6; *O. (Irenella) nouleti tawalekae* subsp. nov. Viti Levu, Fiji p. 244 pl. lxiii f. 13, 14; pl. xlv f. 1-3, H. B. BAKER Bull. Bishop Mus. Honolulu 116 1941.

Palaua gen. nov. Eutonulinae, Helicarionidae, type *Microcytis straminea* Semper 1870 Reisen p. 228, pl. liv f. 1-3; pl. xliii f. 13-15; *P. ngard-uaisi* sp. nov. Babelthaup, Palau p. 231 pl. lv f. 1-3; *P. babelthaupi* sp. nov. Babelthaup, Palau p. 231 pl. liv f. 10-12, H. B. BAKER Bull. Bishop Mus. Honolulu 116 1941.

Peleliua subgen. nov. of *Videna*, type *Trochomorpha pagodula* Semper, Palau, Peleliu, H. B. BAKER Bull. Bishop Mus. Honolulu 116 1941 pp. 280, 281.

Periryua subgen. nov. of *Videna* type *Trochomorpha oleacina* Semper, Palau, Peleliu, H. B. BAKER Bull. Bishop Mus. Honolulu 166 1941 pp. 280, 281.

Quantula subgen. nov. of *Dyakia* type *Nanina striata* Gray 1834 [Malay Peninsula, Singapore], H. B. BAKER Bull. Bishop Mus. Honolulu 116 1941 p. 267 pl. xlvii f. 6, 7.

Rosselidena "Genus *Rosselidena* sp. nov." [gen. nov.] Trochomorphidae, type *Trochomorpha nigrans* Smith Rossel Is.; *R. cornea* Hedley pl. iii f. 12, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 72.

Ryssota (*Trukrhysa*) *pachystoma dubloni* sp. nov. Truk, Caroline Islands, H. B. BAKER Bull. Bishop Mus. Honolulu 116 1941 p. 261 pl. lv f. 15, pl. xlvii f. 11-13.

Serostena gen. nov. [non des.] type *Helix starkei* Brazier Yule Island, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 66.

Triboniophorus graeffei, T. IREDALE 155.

Trochomorpha (*Nigritella*) *küsteri monticola* sp. nov. Ponape, Caroline Islands p. 290 pl. lix f. 7-9; *T. (N.) caroliniae* sp. n. Ponape p. 290 pl. lxxv f. 5; pl. lix f. 5, 6; pl. xlix f. 18-20; *T. (N.) contigua nannolauti* subsp. nov. Ponape p. 291 pl. lviii f. 7-9; pl. xlix f. 10-11; *T. (N.) nigritella paucispira* subsp. nov. Ponape p. 292 pl. lxxv f. 4; pl. lviii f. 2, 3; *T. (N.) nigritella tolotomi* subsp. n. Ponape p. 294 pl. lxxv f. 3; pl. lviii f. 10, 11; *T. (N.) conoides* sp. n. Ponape p. 295 pl. lxxv f. 2; pl. lviii f. 12, 13; pl. xlix f. 15, 17; *T. (Laukula)* subgen. nov. [q.v.] *moalensis* sp. n. Moala, central Fiji p. 301 pl. lxiv f. 7-9; pl. l, f. 4, 5; *T. (L.) kambarae* sp. nov. Kambara, Fiji p. 304 pl. lxiv f. 13-15; pl. l f. 8, 9; *T. (L.) tuouthae* sp. nov.

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Trukrhysa subgen. nov. sec. nov. of *Ryssota* type *Helix pachystoma* Hombron & Jaquinot, H. B. BAKER Bull. Bishop Mus. Honolulu 166 1941 p. 259 pl. xlvii f. 8-10.

Xesta dinawa nubilisensis subsp. nov. Cloudy Bay, Papua, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 69 pl. iii f. 5.—*X. oldhamiana* Port Moresby p. 68 pl. iii f. 1; *X. interjecta* Fly River p. 68, pl. iii f. 2; *X. dinawa* Dinawa, Central Papua p. 68 pl. iii f. 7; *X. complicata*, Cloudy Bay p. 68 pl. iii f. 9; *X. corneocera* Cloudy Bay p. 69, pl. iii f. 4; spp. nov. Papua, T. IREDALE Aust. Zool. Sydney 10 1 1941.

Zagmena gen. nov. Xestidae type *Helix inclinata* Pfeiffer p. 69; *Z. iansonii* p. 70 pl. iii f. 6, T. IREDALE Aust. Zool. Sydney 10 1 1941.

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Badiofaux sec. nov. of *Gongylostoma* for group of *U. trilamellata* (Man. Conch. xv, p. 185) type *Urocoptis trilamellata* (Pfr.), H. A. PILSBRY Naut. Philad. 55 2 1941 p. 70.

Bulimulus alternatus mariae in Alabama, G. K. MACMILLAN 205.

Gongylostoma new sectional names, H. A. PILSBRY 260.

Gongylostomella sec. nov. of *Gongylostoma* for group of *U. wrighti* (Man. Conch. xv, p. 186) type *Urocoptis wrighti* (Pfr.), H. A. PILSBRY Naut. Philad. 55 2 1941 p. 70.

Liguus collecting in the Florida Everglades, figs., H. G. BLACKWELL 40.

Malaitella subgen. nom. nov. for *Acrostylus* Clench 1935 Naut. lxviii, p. 129, non Cossmann 1896 subgenotype *Placostylus acutus* Clench, CLENCH Amer. Mus. Nov. 1129 1941 p. 11.

Microceramus guanicanus sp. n. rare on limestone rock-faces with *Stoastomops puertoricana*, valley behind Cerro Capron, Puerto Rico, H. B. BAKER Notulae Naturae Philad. 88 1941 p. 5 f. 7.

Nesocoptis sec. nov. of *Gongylostoma* for group of *U. pruinosa* (Man. Conch. xv p. 185) type *Urocoptis pruinosa* (Morel.), H. A. PILSBRY Naut. Philad. 55 2 1941 p. 70.

Placostylus (*Acrostylus*) *ophir* sp. n. 20 miles inland from Su'u, Malaita Island, Solomon Islands, p. 11 fig. 9; *P. (A.) malaitensis* sp. n. Malaita Island, Solomon Islands p. 11 fig. 4; *P. (Proaspastus) almiranta* sp. n. 10 miles from Su'u, Malaita Island p. 14 fig. 7; *P. (P.) gallegoi* sp. n. mountains of San Christoval, Solomon Islands p. 15 fig. 6; *P. (Eumecostylus) cleryi cookei* subsp. n. Waiiai, San Christoval, Solomon Islands p. 16, W. J. CLENCH Amer. Mus. Nov. 1129 1941.—*P. (Aspastus) miltocheilus mayri* new name for *miltocheilus minor* Brazier 1894 [1895] (non Kobelt 1891) Pilsbry Man. Conch. 1900 xiii p. 95, I. & B. Rensch 1935, W. J. CLENCH Amer. Mus. Nov. 1129 1941.—*P. (Placostylus) gizoensis* sp. n. Gizo Island, New Georgia Group, Solomon Islands, W. J. CLENCH Amer. Mus. Nov. 1129 1941 p. 5 fig. 10.

Pleurostemma sec. nov. of *Gongylostoma* for group of *U. geminata* (Man. Conch. xv, p. 165, section 11) type *Urocoptis geminata* (Pfr.), H. A. PILSBRY Naut. Philad. 55 2 1941 p. 70.

Pocilocoptis sec. nov. of *Gongylostoma* for group of *U. coerulans* (Man. Conch. xv p. 185) type *Urocoptis coerulans* (Poey), H. A. PILSBRY Naut. Philad. 55 2 1941 p. 70.

Proaspastus subgen. nov. of *Placostylus* subgenotype *Bulimus sanchristovalensis* Cox, W. J. CLENCH Amer. Mus. Nov. 1129 1941 p. 12.

Rennellia sec. nov. Partulidae section type *Partula cramptoni* sp. n. Rennell Island, Solomon Islands, W. J. CLENCH Amer. Mus. Nov. 1129 1941 p. 20 fig. 13.

Scilistylus gen. nov. Partulidae [type only des.] type *Placostylus remotus* Hedley Mambare Goldfield, Northern-border Papua, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 64.

Scopulospica sec. nov. of *Gongylostoma* for group of *torquata* (Man. Conch.

xv p. 185) type *Urocoptis torquata*, H. A. PILSBRY Naut. Philad. 55 2 1941 p. 70.

Steatocoptis sec. nov. of *Gongylostoma* for Group of *U. ventricosa* (Man. Conch. xv p. 185) type *Urocoptis ventricosa* ("Gdl." Pfr.), H. A. PILSBRY Naut. Philad. 55 2 1941 p. 70.

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HELICACEA.

Aleatelix gen. nov. Chloritidae type *Helix strophora* Smith Cloudy Bay, T. IREDALE Cent. Zool. Sydney 10 1 1941 p. 86.

†*Artemon andradai* sp. n. Holocene-Pleistocene Jaceré River, Taréco, Morro do Chapew Bahia, M. G. do O. Roxo Ann. Acad. Bras. Sci. Rio 12 4 1940 p. 277 2 text-figs.

Canefriula gen. nov. [sp. des.] Papuinidae type *Helix tomasinelliana* Tap.-Can. Fly R. Papua, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 74.

Canefriula sricula Brazier p. 75 pl. iii f. 16; *C. cynthia* (Fulton) Brit. New Guinea p. 75 pl. iii f. 11; *C. cingulata* (Hedley) p. 75 pl. iii f. 15; *C. rolandi* sp. nov. Port Moresby p. 75 pl. iii f. 13, T. IREDALE Aust. Zool. Sydney 10 1 1941.

Carmerope gen. nov. Papuinidae type *Helix pileolus* Fér. Moluccas, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 84.

Caroletitia gen. nov. Papuinidae type *Helix diomedes* Braz. "Brumerts error = Coutance Is., fide Braz. himself" p. 80, *C. vilia* sp. nov. Vilirupu S. coast of Papua p. 80 pl. iv. f. 14, T. IREDALE Aust. Zool. Sydney 10 1 1941.

Claudena subgen. nov. [non des.] of *Claudetia*, for *Geotrochus elisus* Hedley, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 76.

Claudetia gen. nov. [non des.] Papuinidae type *Helix bevani* Hedley Douglas R. Brit. New Guinea, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 76 pl. iii f. 17.

Cristigibba fulgida sp. nov. Dinawa Inland from Hall Sound, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 89.

Distenstoma gen. nov. Chloritidae type *Helix dinodeomorpha* Tap.-Can. Fly R. p. 85; *D. nema* sp. n. Purari Valley, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 85.

Dorcasidea gen. nov. Chloritidae type. *Helix subplicifera* Smith N. coast of Papua, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 88.

Emiralea gen. nov. Papuinidae *Helix moseleyi* Smith Admiralty Is., T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 84.

Fruticicola virgo Pils. in Manchoukuo, T. KURODA, 181.

Gemitelix gen. nov. Chloritidae type *Helix perumbigua* Smith "Northern Papua," T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 87.

Goldielix gen. nov. Chloritidae type *Helix rehsei* Martens Taburi, Astrolabe Range p. 87, *G. neptis* sp. n. Cloudy Bay, p. 87 pl. iii f. 21; *G. meraca* sp. n. Fergusson Id. p. 87 pl. iii f. 20; *G. mita* sp. n. Mita, Milne Bay p. 88 pl. iii f. 19, T. IREDALE Aust. Zool. Sydney 10 1 1941.

Helicella caperata Mont., A. G. STUBBS.

Helicigona lapicida (L.) in Shropshire, L. C. LLOYD 193.

Helicoidea superfam. represented in Papua by Papuinid and Chloritid forms but little of Helicid, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 73.

Helix murphyi Cox from Wollongong placed in *Paralaoma* p. 264, T. IREDALE Aust. Nat. Sydney 10 8 1941.—*H. pomatia*, BONNET & JULLIEN 43.—*H. adpersa* Müll., D. BRIGHENTI 47.—*H. nemoralis* L., *lactea* Müll introduced in Southern California, H. R. HILL 130.—*H. pomatia* blood constituents, HOLTZ & BRAND 139.—*H. pomatia* electro physical experiments on nervous system, B. J. KRIJGSMAN 177.—*H. nemoralis* and *hortensis*, variation in composition, A. TÉTRY 328.—*H. pomatia* in Wisconsin, R. G. WASHBURN 348.—*H. p.* action of Potassium on the heart, G. P. WELLS 352.

Helminthoglypta nickliniana *ramen-tosa* (Gould) a sinistral albino example, C. GOODRICH 105.—*H. californiensis* Lea—new localities, E. P. CHACE 58.—*H. umbilicata* and *H. dupetithouarsi*, G. R. WEBB 351.

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T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 84.

Honga gen. nov. Papuinidae type *Geotrochus trobriandensis* Hedley p. 81, *H. deliciosa* sp. nov. Laughlan Ids. p. 81, pl. iv f. 15, T. IREDALE Aust. Zool. Sydney 10 1 1941.

Kathadena gen. nov. Papuinidae [sp. notes only] type *Helix gurgustii* Cox Rossel Is., T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 82.

Kendallena gen. nov. [sp. only des.] Hadridae type *Helix broadbenti* Brazier Port Moresby, New Guinea, T. IREDALE, Aust. Zool. Sydney 10 1 1941 p. 73.

Lejeania aperta sp. n. Yemen N. slope of Jebel Jalal above Nagil Isla pass 9,900 ft., M. CONNOLLY Brit. Mus. (Nat. Hist.) Exped. to S.W. Arabia 1937-8 (1940) 1 p. 22 pl. iii f. 4-6, text-fig. 4.

Lejeania leucosticta (v. Marts.) rad. fig., M. CONNOLLY 71.

Letitia gen. nov. Papuinidae type *Helix brumeriensis* Forbes Brumer Is. Papua p. 78, *L. interrupta* pl. iv f. 9, Milne Bay; *L. moturina* pl. iv f. 10 Moturina, Louisiades; spp. n. p. 79, T. IREDALE Aust. Zool. Sydney 10 1 1941.—*L. subglobosa* (Fulton) p. 79 pl. iii f. 14, T. IREDALE Aust. Zool. Sydney 10 1 1941.—*L. maria* sp. n. Panapompom, Deboyne Group p. 79 pl. iv f. 12, *L. degener* Tuke Tuke, Engineer Group p. 79 pl. iv f. 13; *L. adjuncta* Port Glasgow p. 78 pl. iv f. 8; spp. nov. Papua, T. IREDALE Aust. Zool. Sydney 10 1 1941.

Lisprelia gen. nov. Papuinidae type *Helix novaegeorgiensis* Cox, Solomon, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 85.

Lullicola gen. nov. [sp. note only] Papuinidae type *H. boyerii* Fischer & Bernardi Admiralty Is. error=Woodlark Is., T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 82.

Magitrachia gen. nov. Planispiridae type *Planispira blackiana* Preston, Port Moresby district, Brit. New Guinea, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 91.

Mecynthera gen. nov. Hadridae type *Thersites septentrionalis* Hedley Musa River, N.E. Coast, Brit. New Guinea, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 73.

Medistoma subgen. nov. of *Canefriula* [non des.] for *sicula* [Braz.], T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 74.

Minacispira gen. nov. [sp. only des.] Planispiridae for *lexotropis* Pfeiffer, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 91.

Mocella cogitata nom. nov. for *Planispira corniculum* Rve. New Zealand 1851—not *P. corniculum* Pf. New Guinea 1852, T. IREDALE Aust. Zool. Sydney 10 1 1941 p. 91.

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Streptaxis [Streptaxis], M. G. DE O. Roxo Ann. Acad. Bras. Sci. Rio 12 4 1940 p. 278.

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†*Dentalium haeringense densitexta* **var. nov.** Rupelian [Oligocene] Buda Pest district, N. NOSZKY Ann. hist.-nat. Mus. hung. Min.-Geol. 33 1940 p. 51.—*D. neohexagonum* Shp. & Pils. Pleistocene Long Beach, Calif., J. H. DE LONG 80.

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†*Ledella pakaurangiensis* sp. n. [Miocene] Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 2 1941 p. 134 pl. xvi f. 12.

Nucula (*Nuculopsis*) [sic] *schencki* sp. n. resembles *N.* ("Nuculopsis") *hilli* Woodring of the Miocene Jamaica, 7 fms. lat. 15° 14' 28" N., long. 96° 07' 51" W. Port Guatuleco, Mexico, gray sand and crushed shell bottom, L. G. HERTLEIN & A. M. STRONG Zoologica New York 25 1940 pp. 369, 384 pl. i f. 8-10.

†*Nucula* (*Linucula*) *waiaotea* sp. n. [Miocene] Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 2 1941 p. 134 pl. xvi f. 2.—*N.* (*Ennucula*) *grice* sp. n. Grice's Creek between Frankston and Mornington, Victoria, Balcambian (Middle Miocene?), F. A. SINGLETON Proc. roy. Soc. Vict. N.S. 53 2 1941 p. 423 pl. xx f. 1a, b.

Nuculana (*Costelloleda*) *marella* sp. nov. Gulf of California? (collected by Expedition 1936), L. G. HERTLEIN & A. M. STRONG Zoologica New York 25 1940 pp. 370, 399 pl. ii f. 12, 13.

†*Nuculana* (*Scaeoleda*) *killara* sp. n. Werrekoian (Uppermost Pliocene) Glenelg R. "Roscoes", Killara, Western Victoria, F. A. SINGLETON Proc. roy. Soc. Vict. (N.S.) 53 2 1941 p. 424 pl. xx f. 2.

†*Nuculites seductus* sp. nov. Saugh Hill Group (Ordovician) Newlands Girvan, F. R. C. REED Geol. Mag. London 78 4 1941 p. 276 pl. v f. 10.

†*Nuculopsis* (*Nuculopsis*) *gibbosa* (Fleming) emend. Schenck figs., R. G. S. HUDSON 142.

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†*Cucullaea personata* sp. nov. Bathonian, Nala N. of Pang-hkyem, Burma, F. R. C. REED Ann. Mag. Nat. Hist. (10) 18 1936 p. 18 pl. ii f. 13.

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†*Glycymeris canoa* (Arcidae) sp. n. Canoa formation, Pliocene, Punta Blanca, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941 p. 54 pl. xiii f. 2, 2a.—*G.* (*Veleutacea*) *pseudaustralis* sp. n. Werrekoovian (Uppermost Pliocene), Glenelg R. "Roscoes", Killara, Western Victoria, F. A. SINGLETON Proc. roy. Soc. Vict. (N.S.) 53 2 1941 p. 425 pl. xx f. 4, 5.

†*Hochstetteria awamoana* sp. n. [Miocene], Shell-bed Target Gully, Oamaru (Awamoan) New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 2 1941 p. 151 pl. xvi f. 14.—*H. dupliradata* p. 135 pl. xvi f. 6; *H. zearanea* p. 135 pl. xvi f. 1, 3; spp. n. [Miocene] Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 2 1941.

†*Limopsis werrikoensis* sp. n. Werrikoian (Uppermost Pliocene), Limestone Creek, Glenelly R., Western Victoria, F. A. SINGLETON Proc. roy. Soc. Vict. (N.S.) 53 2 1941 p. 425 pl. xx f. 3a, b.

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†*Aulacomya suberosa* sp. n. Werrikoian (Uppermost Pliocene), Limestone Creek, Glenelg R., Western Victoria, F. A. SINGLETON Proc. roy. Soc. Vict. (N.S.) 53 2 1941 p. 427 pl. xx f. 7.

†*Crenella ecuadoriana* sp. n. Pliocene Canoa formation, Punta Blanca, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941 p. 55 pl. 18 f. 2, 3.

†*Inoceramus concentricus nipponicus*, *c. costatus*, *I. hobetsensis nonsulcatus*, *I. awafimensis yeharai*, *I. incertus yubariensis*, *I. balticus kunimiensis*, *I. orientalis ambiguus*, *I. sachalinensis ventrifomis* vars. nov. Cretaceous Japan.—*I. tenuistriatus*, *teshionis*, *pedalionoides*, *hobetsensis*, *iburiensis*, *yabei*, *shikotanensis*, *japonicus*, *yokoyamai*, *pseudosulcatus*, *kuseroensis* spp. n. The abstractor gives also *ukawaensis*, *vanuxemiformis* MSS. Cretaceous Japan, T. MATUMOTO J. Fac. Sci. Hokkaido Imp. Univ. Sec. 4 4 (1939) pp. 241-299 plates [non vidi] (ex abst. 142 Jap. J. Geol. Geogr. 17 1, 2 1940 p. 25).—*I. labiatus*, *bercynicus*, F. K. G. MÜLLER-LEIREID 236.

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†*Trigonioides kodairai paucisulcatus* subsp. nov. Taikyū formation, Hyakundo, Hokuan-men, Eisen-gun, Middle Cretaceous, Japan, K. SUZUKI Japan J. Geol. Geogr. 17 3-4 1940 pp. 216, 229 pl. iii [xxiv] text-figs. 18-20.

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†*Aviculopecten lepidus* sp. nov. Namurian [Upper Carboniferous] Bristol, L. R. MOORE Geol. Mag. London 78 4 1941 p. 281 pl. vi f. 6.

†*Gervillia dodgei* sp. n. Cenomanian Hajula, Lebanon, H. E. VOKES Amer. Mus. Nov. 1145 1941 pp. 2, 6 figs. 1-4.

†*Oxytoma atarum* Waagen var. *caucasia* Licharew var. nov. pl. xxxii f. 9 Permian U.S.S.R., B. I. TCHERNISHEW Geol. Com. Sci. & Prosp. Inst. 6 1939.

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†*Pteria*? *laksel* sp. n. Trias, Mchay spur Peace River foothills B.C., F. H. McLEARN Canad. Field Nat. 55 3 1941 p. 31 pl. i f. 3.

†*Pteroperna decorata* sp. nov. Nala, N. of Pang-hkyem, east of Lashio-Namtu road, Burma (Orubras), F. R. C. REED Ann. Mag. Nat. Hist. (10) 18 1936 p. 12 pl. i f. 2.

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†*Lima* (*Limatula*) *childerhosei* sp. n. Trias Pardonet Hill, F. H. McLEARN Canad. Field Nat. 55 3 1941 p. 32 pl. i f. 8.

†*Votochlamys antecedens* nom. nov. for *Pecten praecursor* Chapman, 1912, not *Pecten* (*Amusium*) *precursor* Dall, 1898, F. A. SINGLETON Proc. roy. Soc. Vict. (N.S.) 53 2 1941 p. 427.

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Pecten (*Chlamys*) *imbricatus milledrae* var. nov. Florida, T. BAYER Naut. Philad. 55 2 1941 p. 46 pl. iii f. 16, 17.—*P.* (*Patinopecten*) *yessoensis* Jay effect of temperatures in spawning, T. KINOSHITA 173.—*P. circularis*, feeding, G. E. MACGINITIE 203.

†*Pecten kimurai ugoensis* subsp. n. Japan, HATAI & NISHIYAMA J. Geol. Soc. Japan. 46 1939 pp. 87-46.—*P. shivanae* Mahaffy Cliffs p. 32 pl. i f. 7; *P. sasuchan* Pardonet Hill p. 32 pl. i f. 6; spp. nov. Trias, F. H. McLEARN Canad. Field Nat. 55 3 1941.—*P.* (*Swiftpecten*) *nanakitaensis* sp. n. Nanakita Beds [Pliocene], Dôniwayama, Nenosirosi-mura, Miyagi-gun, Miyagi-ken, Japan, M. NAKAMURA J. Geol. Soc. Japan 47 561 1940 p. 263 text-fig.—*P. arcuatus* Tertiary, I. KATSCHARAWA 166.—*P.* as a Burdigalian indicator, M. J. ROGER 278.

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†*Gryphaea lashioensis* sp. nov. Cornbrash, Lashio-Namtu Road, Burma, F. R. C. REED Ann. Mag. Nat. Hist. (10) 18 1936 p. 7 pl. i f. 4, 5, 5a.—*G. calceolaeformis* sp. n. Jurassic Donau-Rheinzugs, L. SCHÄFLE Geol. u. pal. Abhandt. n. F. 17 2 1929 p. 55 [117]

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†*Lopha asellus* Mérian *namtuensis* var. nov. Cornbrash, Lashio-Namtu Road, Burma, F. R. C. REED Ann. Mag. Nat. Hist. (10) 18 1936 p. 9 pl. i f. 1, 1a, 1b.

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†*Unio moraiensis* sp. nov. (= *Tapes* ?)
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Tokyo (2) 3 4 p. 188, Pliocene Oiwake
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†*Grassinella clementia* p. 56 pl. xii f. 8; *C. haylocki* p. 57 pl. xviii f. 7, 8; spp. n. Pliocene, Canoa formation, Punta Blanca, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941.

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†*Trapezium? subtrigonum* sp. n. Union Parish, Louisiana, R. W. IMLAY J. Paleont. Menasha Wis. 15 3 1941 p. 270 pl. xxxviii f. 41.

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†*Lucina (Parvilucina) callosana* p. 57, pl. xviii f. 6; *L. (Luciniscia) fausta* p. 58 pl. xvii f. 3-6; spp. n. Pliocene, Canoa formation, Punta Blanca, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941.—*L. hajulaensis* sp. n. Cenomanian Hajula, Lebanon, H. E. VOKES Amer. Mus. Nov. 1145 1941 p. 10 fig. 11.

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†*Laevicardium pedernalense* sp. n. Pliocene, Jama formation, Puerto Jama, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. **93** 1941 p. 60 pl. xiv f. 2.

†*Limnocardium pappi* p. 82 text-fig. 1; *L. praedesertum* p. 82 text-figs. 2a, b, spp. nov. [Miocene], Hungary, L. STRAUSS Ann. hist.-nat. Mus. hung. Min.-Geol. **6** **33** 1930.

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†*Anomalocardia callistoides* sp. n. Pliocene Jama formation, Upper Zone at Puerto Jama, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. **93** 1941 p. 65 pl. xiv f. 4, 5, 8.

†*Anthonya dayi* sp. n. Cenomanian Hajula, Lebanon, H. E. VOKES Amer. Mus. Nov. **1145** 1941 p. 9 fig. 7.

†*Chione osyuensis* sp. nov. Lower Miocene, Sennan District, Japan, NOMURA & ONISI Japan J. Geol. Geogr. **17** 3-4 1940 p. 183 pl. xviii f. 17.—*C. traftoni* sp. n. type from Pleistocene, Quebrada Rabo de Puerco, near Puerto Armuelles, Chirique Province, Western Panama; occurs also Pliocene Canoa formation Punta Blanca, Western Ecuador, p. 61 pl. xvi f. 4, pl. xvii f. 4.—*C. manabita* Canoa formation, Pliocene, Punta Blanca p. 62 pl. xvi f. 1, 3; *C. venadensis* Jama formation Punta Venado, Pliocene p. 63 pl. xvi f. 5, 5a; *C. jamaniana* Jama formation Puerto Jama p. 63 pl. xvii f. 1, 2; *C. (Lirophora) gorgona* Jama formation, Puerto Jama p. 65 p. xix f. 2; spp. n. Pliocene, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. **93** 1941.

†*Cyclinella galera* sp. n. Pliocene Jama formation, Puerto Jama, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. **93** 1941 p. 66 pl. xii f. 1, pl. xix f. 4.

†*Dosinia sibutaensis* sp. nov. Lower Miocene, Sennan District, Japan, NOMURA & ONISI Jap. J. Geol. Geogr. **17** 3-4 1940 183 pl. xviii f. 1.—*D. suketoensis* sp. n. Miocene Tyugoku, Japan, Y. OTUKA J. Fac. Sci. Univ. Tokyo Sec. 2 Geol. Min. **L5** 1939 pp. 21-45 [non vidi] [from Abstract ex Jap. J. Geol. Geogr. **17** 1, 2 1940].—*D. matumotoi* sp. n. Neogene Ihara District, Sizuoka Prefecture, Japan, Y. OTUKA

J. Fac. Sci. Univ. Tokyo Sec. 2 **5** 1938 pp. 1-20 [non vidi] [ex Abstract 144 Jap. J. Geol. Geogr. **17** 1, 2 1940 p. 28].

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†*Meretrix arugai* sp. n. Miocene, Tyugoku, Japan, Y. OTUKA J. Fac. Sci. Univ. Tokyo Sec. 2 Geol. Min. **L5** 1939 pp. 21-45 [non vidi] [from Abstract ex Jap. J. Geol. Geogr. **17** 1, 2 1940].

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†*Paphia hirabayashii* sp. n. Neogene Ihara District, Sizuoka Prefecture, Japan, Y. OTUKA J. Fac. Sci. Univ. Tokyo Sec. 2 **5** 1938 pp. 1-20 [non vidi] [ex Abstract 144, Jap. J. Geol. Geogr. **17** 1, 2 1940 p. 28].

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†*Mulinia camina* Jama formation, Punta Cabuyal p 74 pl. xix f. 6-7; *M. guagassensis* Pana Island p. 74 pl. xix f. 3-8; spp. n. Pliocene, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941.

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†*Macoploma* subgen. nov. of *Macoma*, type *Macoma (Macoploma) ecuadoriana* sp. n. Pliocene, Canoa formation, Punta Blanca, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941 p. 69 pl. xix f. 5.

†*Notocorbula innerans* p. 136 pl. xvi f. 4-5; *N. illecta* p. 137 pl. xvi f. 7-11; spp. n. [Miocene] Pakaurangi Point, Kaipara, New Zealand, C. R. LAWS Trans. Proc. Roy. Soc. N.Z. 71 2 1941.

†*Semele jaramija* sp. n. Pliocene, Canoa formation, Punta Blanca, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941 p. 70 pl. xvii f. 5.

†*Solecortus broggii* sp. n. Jama for Puerto Jama, Pliocene Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941 p. 71 pl. xviii f. 4.

†*Tagelus (Mesopleura) peruvianus* sp. n. Punta Blanca beds, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941 p. 70 pl. xviii f. 5.

†*Tellina (Eurytellina) ecuadoriana* Canoa formation, Punta Blanca p. 67 pl. xv f. 6-8; *T. (Eurytellina) lapiatea* Canoa formation, Punta Blanca p. 6 pl. xv f. 1-5; *T. (Macaliopsis) aequizonata* Jama formation, Puerto Jama p. 68 pl. xiv f. 7; spp. n. Pliocene, Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941.—

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†*Corbula ecuabula* sp. n. Canoa formation, Punta Blanca, Pliocene Western Ecuador, PILSBRY & OLSSON Proc. Acad. nat. Sci. Philad. 93 1941 p. 75 pl. xii f. 3, 4, 5.

†*Myalina acutirostris* sp. nov. Lower Quartermaster formation, Permian Texas, ROTH, NEWELL & BURMA J. Paleont. Menasha Wis. 15 3 1941 pp. 312, 315 pl. xlv f. 11-15.—*M. aff. schamarae* Bittner Permo-Triassic Idaho, NEWELL & KUMMEL 243.

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†*Hebetoceras* **gen. nov.** pp. 538, 545 of Hebetoceratinae, Hebetoceratidae, [q.v.] genotype *H. mirandum* **sp. n.** p. 545 pl. lxxvi f. 1-7, Valcour limestone Upper Chazy, Lower Ordovician, Clinton Co., New York; *H. ? cylindri-forme* **sp. n.** p. 546 pl. lxxvi f. 11-13, loc. as genotype, R. H. FLOWER J. Paleont. Menasha Wis. 15 5 1941.

†Hebetoceratidae **fam. nov.** (Suborder Mixochoanites, order Nautiloidea) with Hebetoceratinae, Probillingsitinae subfam. nov. p. 538, 539, R. H. FLOWER J. Paleont. Menasha Wis. 15 5 1941.

†Hebetoceratinae **subfam. nov.** of Hebetoceratidae [q.v.] containing genera *Montyoceras*, *Hebetoceras*, *Ecdyceras* **genn. nov.** [q.v.], R. H. FLOWER J. Paleont. Menasha Wis. 15 5 1941 pp. 538-539.

†*Montyoceras* **gen. nov.** pp. 538-544 of Hebetoceratidae, subf. Hebetoceratinae, [q.v.] genotype *M. arcuatum* **sp. n.** pp. 540, 544 pl. lxxvi f. 8, 9, Valcour limestone, Chazy, Lower Ordovician Clinton Co., New York; *M. curviseptatum* p. 544 pl. lxxvi f. 10; *M. titaniforme* p. 544 pl. lxxvii f. 4-5 **spp. n.** stage and loc. as genotype, R. H. FLOWER J. Paleont. Menasha Wis. 15 5 1941.

†*Nautilus pompilius intermedius* figs., W. D. LANG 183.

†Probillingsitinae **subfam. nov.** of Hebetoceratidae fam. nov. [q.v.] containing genera *Probillingsites* Foerste 1928, *Shamattavaceras* Foerste & Savage 1927, R. H. FLOWER J. Paleont. Menasha Wis. 15 5 1941 p. 538.

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†*Adriánites globosus* **sp. n.** Permian U.S.S.R., A. A. TOCKERNOV Geol. Com. Sci. & Prosp. Inst. 6 1939 p. 179 text-fig. 75 pl. xlv f. 2.

†*Advena* Palmer 1937 = *Anevda* Palmer 1940 = *Belemnosella* Naef 1922, H. B. STENZEL 311.

†*Akmilleria* **gen. nov.** Medlicottiidae, type *Propinacoceras transitorium* Haniel 1915 S. 39 Taf 2 f. 5, also includes *Artinskia whortani* Miller, *A. adkinsi* P. & S., *A. electraensis* P. & S. and *A. haecoensis* M. & F., V. E. RUZHENCEV C. R. Acad. Sci. Moscow 28 5 1940 p. 474.

†*Altudoceras* **gen. nov.** Popanoceratidae, type *A. altudense* (Böse) Miller & Furnish 1940, V. E. RUZHENCEV C. R. Acad. Sci. Moscow 28 3 1940 p. 286.

†*Ammonites* [s.l.], W. D. LANG 183.

†*Anevda* Palmer 1940 = *Belemnosella* Naef 1922, H. B. SENZEL 311.

†*Artinskia notabilis* **sp. nov.** Dolomite of the Artinskian stage [Lower Permian], Aktasty river, Aktiubinsk district, V. E. RUZHENCEV C. R. Acad. Sci. Moscow 28 5 1940 p. 475 text-fig.

†*Aspadites schencki* sp. n. Trias, New Pass, Nevada U.S.A., F. N. JOHNSTON J. Paleont. Menasha Wis. 15 5 1941 p. 458 pl. lx f. 1, 2 text-fig. 1e.

†*Aturia* cf. *A. aturi* (Basterot) from the I. of Eua, Tongan Archipelago text-fig., A. K. MILLER 221.

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†*Bisatoceras sacrum* sp. nov. Outerop 2 km. N.E. of Akhunova, Mount Satra, Urals, lower part of the Schwagerina beds (Lower Paleozoic), S. V. MAXIMOVA C. R. Acad. Sci. Moscow 28 9 1940 p. 860 text-fig.

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†*Cravenoceras cowlingsense* Bisat figs., R. G. S. HUDSON 142.

†*Crioceras ramososeptatoides* sp. nov. pp. 150, 203 pl. iv f. 1 text-figs. 30, 31; *C. r. maxima* var. nov. pp. 153, 204 pl. vi f. 2 text-fig. 32, Aptian, North Caucasus, J. ROUCHADZE Bull. Inst. Géol. Georgie Tiflis 4 2 1938.

†*Diptychoceras nikchitchi* sp. n. Aptian, N. Caucasus, J. ROUCHADZE Bull. Inst. Géol. Georgie Tiflis 4 2 1938 pp. 119, 192 pl. i f. 3-5.

†*Douvilleiceras subnodosocostatum* Sinz. *hexagonum* var. nov. Aptian, North Caucasus, J. ROUCHADZE Bull. Inst. Géol. Georgia Tiflis 4 2 1938 pp. 127, 196 pl. ii f. 3.

†*Ellesmeroceras expansum* sp. nov. p. 9 pl. ii f. 3-5.—*E. bridgei* sp. nov. N.E. of Cassiterite Mine, Ozarkian (?) York District, Seward Peninsula, Alaska, R. H. FLOWER Bull. Amer. Paleont. Ithaca 27 162 1941 pp. 6, 9 p. ii f. 3-5.

†*Ellesmeroceratidae*, R. H. FLOWER 93.

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†*Gastrioceratidae* fam. nov. type gen. *Gastrioceras* Hyatt 1883 includes such genera as *Agastrioceras*, *Bisatoceras*, *Branneroceras*, *Cravenoceras*, *Diaboloceras*, *Eoparalegoceras*, *Gastrioceras*, *Glaphyrites*, *Homoceras*, *Nuculoceras*, *Paragastrioceras*, †*Zephyroceras* figs., W. D. LANG 183.

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†*Hannaoceras newpassense* sp. nov. Trias, New Pass, Nevada, U.S.A., F. N. JOHNSTON J. Paleont. Menasha Wis. 15 5 1941 p. 454 pl. lix f. 10-16 text-fig. 1d.

†*Hysteroeras varicosum* (Sow.) *angolana* var. nov. Albian, Angola, O. HAAS Amer. J. Sci. New Haven 239 9 1941 p. 661 text-figs. 1, 2 pl. i.

†*Ilowaiskya* nom. nov. = *Sokolovia* Ilowaisky 1934 non Böhm 1933 [*Virgatitidae*], genotype *Ilowaiskya sokolovi* Ilov. (= *Virgatosphinctes contiguus* Sokolov, non Catt.) Vetliank horizon, Upper Jurassic, O. S. VIALOV C. R. Acad. Sci. Moscow 29 1 1940 p. 78.

†*Joannites jacobus* sp. nov. Trias, New Pass, Nevada, U.S.A., F. N. JOHNSTON J. Paleont. Menasha Wis. 15 5 1941 p. 477 pl. lxii f. 6-9, pl. lxiii f. 4, pl. lxiv f. 1-7, pl. lxv f. 1-3, pl. lxix f. 6, pl. lxx f. 1-2, pl. lxxi f. 12.

†*Juresanites* gen. nov. Somoholitidae type *J. primitivus* sp. nov. Yurezan R. lower part of Schwagerina beds (base of the Sakmarian [Lower Paleozoic]), S. V. MAXIMOVA C. R. Acad. Sci. Moscow 28 9 1940 p. 862 text-fig.

Knemericeras mintoi (Vredenburg), G. W. CHIFLONKER 61.

†*Lecanites trauthi* sp. nov. Trias, New Pass, Nevada, U.S.A., F. H. JOHNSTON J. Paleont. Menasha Wis. 15 5 1941 p. 455 pl. lix f. 17-20.

†*Leurocyclloceras* Foerste, Em. Flower defined here as being confined to species of Middle Silurian *L. bucheri* sp. n. Laurel limestone, about 2 miles east of Westport, Decatur County, Indiana, R. H. FLOWER Amer. J. Sci. New Haven 239 7 1941 p. 477 pl. ii f. 4, 5, pl. iii f. 1-4.

†*Lobites (Lobites) carinatus* p. 466 pl. lxi f. 5-9 text-fig. 26; *L. (L.) gargantua* p. 466 pl. lxii f. 1-5; *L. (Coroceras) zephyrus* p. 468 pl. lxi f. 10-14 text-fig. 3c, spp. n. Trias, New Pass, Nevada, U.S.A., F. H. JOHNSTON J. Paleont. Menasha Wis. 15 5 1941.

†*Meniscoceras* gen. nov. type *M. coronense* sp. nov. Middle Chazy limestone of Crown Point, New York, R. H. FLOWER Palaeont. Americana Ithaca 3 13 1941 p. 30 pl. ii f. 1-11.

†*Metahedenstroemia*? *desertorum* sp. nov. Trias, New Pass, Nevada, U.S.A., F. N. JOHNSTON J. Paleont. Menasha Wis. 15 5 1941 p. 460 pl. lx f. 6-8, pl. lxi f. 1-4, pl. lxiii f. 3 text-fig. 1g, 1h, 2a.

Namadoceras scindais Vredenburg, G. W. CHIPLONKER 61.

†*Orthoceras guadalupense* Girty, in Hookly Co., Texas p. 382 pl. lv f. 27, STAINBROOK & MADERA 308.

†*Paracladiscites rogersi* p. 478 pl. lxxv f. 8-9; *P. mulleri* p. 480 pl. lxxv f. 4-7, pl. lxxvi, f. 5-7 text-fig. 3f, g, spp. n. Trias, New Pass, Nevada, U.S.A., F. N. JOHNSTON J. Paleont. Menasha Wis. 15 5 1941.

†*Paragastrioceras* gen. nov. p. 172 Glyptioceratidae, type *Paragastrioceras jossae* (Verneuil) Permian, U.S.S.R. p. 173 text-fig. 61 pl. xlii f. 3, A. A. TSCHERNOV Geol. Com. Sci. & Prosp. Inst. 6 1939.

†*Paragastrioceras jossae subtrapezoidalis* var. nov. Max. & Tocher. in litt. p. 173 text-fig. 62 pl. xlii f. 4; *P. kojimense* Max. & Tschern. in litt. p. 173 text-fig. 63 pl. xlii f. 6, A. A. TSCHERNOV Geol. Com. Sci. & Prosp. Inst. 6 1939.

†*Parahodlites*, p. 147, *Parahoplites* p. 202, *sjogreni* Auth. *kubanica* var. nov. pp. 147, 202, text-fig. 26; *P. sjogrenoides* sp. n. p. 202 pl. iii f. 3 text-figs. 27, 28: Aptian North Caucasus, J. ROUCHADGE Bull. Inst. Géol. Georgie, Tiflis 4 2 1938.

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10. CRUSTACEA

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W. L. SCLATER, M.A.

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†*Neokloedenella ? magna* sp. n. Carbonif. Illinois, COOPER Rep. Inves. Sta. geol. Surv. Illinois no. 77 p. 57 figs.

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†*Parabolbina loculosa* sp. n. Devonian Tennessee, BASSLER J. Wash. Acad. Sci. 31 p. 22 fig.

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12. ARACHNIDA

TO WHICH ARE ADDED

ARTHROCEPHALA, MEROSTOMATA, PANTOPODA, TARDIGRADA,
PENTASTOMIDA, MYRIOPODA, AND PROTOTRACHEATA.

ARRANGED BY

E. BROWNING.

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PROTOTRACHEATA.

[No record.]

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13. INSECTA

BY

THE IMPERIAL INSTITUTE OF ENTOMOLOGY

FOREWORD

THE attention of readers is directed to the fact that, beginning with Vol. 74 (1937), the systematic part of the Record is reserved only for information of purely taxonomic value. References to data on morphology, physiology, bionomics, ecology, distribution and other general problems will not be found as before under their respective groups in the systematic part, but must be looked for in the Subject Index, where they are arranged by orders under each heading. The classification of headings in the Subject Index has been revised in order to make the information more complete and readily available. It is hoped that this change will render the Record of more value for entomologists working on general problems, without affecting its importance for taxonomists.

Entomological papers written entirely from an economic point of view are omitted, but abstracts of these will be found in the *Review of Applied Entomology*.

Very brief papers, usually those dealing with a single species, are noticed either in the Subject Index or in the systematic part, but do not appear in the list of titles.

The writers of systematic papers are requested to mark new synonyms with the words (*n. syn.*), as otherwise it is impossible to ensure that they will be correctly recorded.

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Lepidoptera: AGENJO, Thaumetopoeidae (Notodon.), monograph, 13; HIGGINS, *Melitaea* (Nymph.), illus-

trated catalogue, 788; SZILÁDY, Syrphidae, revision, IV, 1511.

Orthoptera: ZEUNER, Decticinae (Tettigon.), revision, 1761.

EUROPE, collectively.

Coleoptera: PFEFFER, *Liparthrum* (Scolyt.), key, 1261.

Hymenoptera: BENSON, Fenusini (Tenth.), key and revision, 121.

Orthoptera: MATTHEY, *Saga* spp. (Tettigon.), distribution, 1104.

NORTH EUROPE AND SIBERIA.

Insecta: GÍGJA, Iceland, 680, 681.

Coleoptera: FALKENSTRÖM, Scandinavia and Denmark, additions to catalogue, 570; LUMIALA, Anthribids, Curculionids, Finland, distribution, 1041; PALM, *Colon* (*Curvimanon*) (Silph.), key and spp. n. Lapland, 1219; spp. new to Sweden (contd.), 1220; PALMÉN, *Copelatus*, *Philonthus*, *Platysoma*, Finland, distribution, 1221.

Lepidoptera: NIELSEN, Zealand, list, 1194.

Diptera: RINGDAHL, Brachycera, Halland, Sweden, 1346; *Limnophora* (Musc.), Sweden, keys, spp. n. Finland, 1347; TIENSUU, Muscids, Finland, new records, 1551.

Hemiptera: BECKER-MIGDISOVA, fossil Prosboldidae, Sojana River, N. Russia, revision, 103.

Thysanoptera: HUKKINEN & SRY-YÄNEN, Finland, 7, 850.

Orthoptera: BERNSTRÖM, *Periplaneta orientalis* (Blatt.), Sweden, distribution, 135.

BRITISH ISLES.*

Insecta: KEVAN, Isle of Eigg, 931; WILLIAMSON & COWIN, Isle of Man, 1940, 1713.

* Small local lists, county records, etc., are not included; they are fully recorded in the Journal of Animal Ecology.

Coleoptera : BALFOUR-BROWNE, aquatic Col., E. and W. Sussex, **71**; VAN EMDEN, key to Lamellicorn larvae, **540**; HINTON, *Holoparamesus* (Lathrid.), key, **794**; *Cartodere* (Lathr.), key, **799**; KAUFMANN, carrion beetles, **924**.

Hymenoptera : BEIRNE, Diplazonini (Ichneum.), revision, **110**; GRAHAM, E. Lincolnshire, **705**; PERKINS, Pimplini, revision, **1256**; SPOONER, *Pompilus trivialis, unguicularis, wesmaeli*, distribution, **1475**; STELFOX, *Ephedrus* (Aphidiid.), key to Irish spp., **1485**; YARROW, *Lindenius* (Spheg.), key, **1743**.

Lepidoptera : BEIRNE, Microlep., Ireland, list, **109**; BEIRNE & LISNEY, Irish Lep., 1939, **112**; FLETCHER & CLUTTERBUCK, Microlepidopt., Gloucestershire, list (contd.), **597**; TURNER, Noctuids, **1596**.

Neuroptera : GRAHAM, E. Lincolnshire, **705**.

Diptera : COLLIN, *Medeterus* (Dolich.), **351**; EDWARDS, Mycetophilidae, additions and corrections to list, excluding Sciarinae, **531**; Heteropezinae (Cecid.), **532**; WAINWRIGHT, Tachinidae, corrections to 2nd suppl., **1652**; WRIGHT, Syrphidae, N. Lancashire and S. Westmorland, **1731**.

Hemiptera : BROWN, aquatic Hemipt.-Heteropt., Hertfordshire, **197**; CHINA, Corizinae, **295**; GRAHAM, E. Lincolnshire, **705**; MORLEY, *Cicadetta montana*, history, 1812-1940, **1159**; THOMAS & JACOB, *Pentatrichopus* (Aphid.), **1545**.

Anoplura : CRAUFORD-BENSON, cat-
tle lice, **399**.

Plecoptera : HYNES, nymphs, taxonomy and ecology, **870**.

CENTRAL AND EASTERN EUROPE.

Hymenoptera : MEYER, *Trichogramma*, spp. and rr., U.S.S.R., **1114**; TELENGA, Braconinae (contd.), Sigalphinae (Bracon.), U.S.S.R., **1534**.

Lepidoptera : THOMANN, Puschlav, Switzerland, list, **1543**.

Diptera : ACZÉL, *Musidora* (Lonchop.), distribution, **9**; DUMBROVS-

KAYA, Cecidomyiids, Kujbyshev, Samara, **503**; PARAMONOV, Bombyliinae, U.S.S.R., **1224**.

Hemiptera : KIRICHENKO, Coccids, U.S.S.R., **938**.

SOUTH EUROPE.

Coleoptera : FRANZ, *Aoromius* (Curc.), revision, **624**.

Hymenoptera : CEBALLOS, Phyga-deuonini (Ichneum.), Spain, revision, **276**; GINER MARÍ, *Cerceris* (Spheg.), Spain, monograph, **685**.

Orthoptera : EBNER, S. Portugal, **529**; MORALES AGACINO, *Gryllotalpa* spp., Spain, **1156**.

MEDITERRANEAN ISLANDS.

Thysanoptera : PRIESNER, *Oxythrips* sp. n., Cyprus, **1292**.

CAUCASUS, WEST AND CENTRAL ASIA.

Insecta : AHMAD, Afghanistan, survey, **14**; TER-MINASYAN, zoogeography of Armenia and Nakhichevan Rep., **1537**.

Coleoptera : KOBAKHIDZE, Kolkhida lowlands, **959**; TER-MINASYAN, Curculionidae, Armenia and Nakhichevan Rep., **1537**.

Hymenoptera : MEYER, *Trichogramma*, spp. & rr., U.S.S.R., **1114**; TELENGA, Braconinae (contd.), Sigalphinae (Bracon.), U.S.S.R., **1534**.

Lepidoptera : WILTSHIRE, Mesopotamian desert Lep., **1719**.

Diptera : PARAMONOV, Bombyliinae, U.S.S.R., **1224**.

Hemiptera : KIRICHENKO, Coccids, U.S.S.R., **938**.

NORTH AFRICA.

Coleoptera : KOCH, *Pimelia* (Tenebr.), Morocco, revision, **962**; DE PEYERIMHOFF, additions and corrections to catalogue of Saharan Col., **1260**; PFEFFER, *Liparthrum* (Scolyt.), key, **1261**.

Hymenoptera: DE BEAUMONT, *Lep-tolarra* (Spheg.), Egypt, 97; *Tachysphex*, Egypt, revision, 98; GINER MARI, *Cerceris* (Spheg.), revision, 686; HONORÉ, *Cerceris* (Spheg.), Egypt, 821; *Palarus* (Spheg.), Egypt, revision, 822; PRIESNER, *Trichopria* (Diapr.), Egypt, key, 1293.

Lepidoptera: LUCAS, Microlepidoptera, Beni-Ounif, 1037.

Thysanura: WYGODZINSKY, 1737.

AFRICA.

Coleoptera: BRYANT, *Phyllotreta* (Haltic.), list, key, 218; HINTON, Colydiidae, Abyssinia, 789; LABOISSIÈRE, Galerucinae, Angola, 992; THÉRY, Buprestids, E. Africa, 1540.

Hymenoptera: FRIESE, Apidae, S. E. Africa, list, 636; NIXON, *Rhaconotus*, (Brac.), 1196.

Diptera: CURRAN, Tachinidae, III, 420; CUTHBERTSON, Tachinidae, S. Rhodesia, preliminary list, 426; DE MEILLON & REBÊLO, Culicines, Mozambique, 463; DUDA, *Drosophila*, revision, II, 525; EDWARDS, Culicines, 530; VAN EMDEN, Muscidae, I, Abyssinia, 538; Scatophaginae, Anthomyiinae, Lispiniae, Fanniinae (Musc.), keys, 539; MCCARTHY, *Anopheles*, Zanzibar, 1048; ZUMPT, Stomoxydinae, list, 1768.

Mallophaga: HOPKINS, *Felicola*, *Protelicola*, key, 827.

Odonata: FRASER, Cameroons, 629; *Ceragrion*, key, 630; *Tetrathemis*, key, 631.

Orthoptera: REHN, *Pristocorypha* (Acrid.), revision, 1319; REHN, *Pneumoridae* (Acrid.), revision, 1322; UVAROV & VAN SOMEREN, Acrididae, Chyulu Hills, Kenya, 1620.

MADAGASCAR AND MASCARENE ISLANDS.

MADAGASCAR.

Coleoptera: ARROW, *Paranodon* sp. n. (Dynast.), 52.

Hymenoptera: BANKS, Pompilidae, 76.

Diptera: EDWARDS, *Culex*, sp. n. 530; HULL, Syrphids, revision, 858.

Mallophaga: CLAY, *Goniodes* sp. n., 334.

MAURITIUS.

Coleoptera: HUSTACHE, new Curculionidae, 866.

Hemiptera: MAMET, Aphidae, list and key to subfam., 1077; Coccidae described by de Charmoy, 1078; *Pseudococcus* sp. n., 1080; TAKAHASHI, new Aleurodids, 1519.

SEYCHELLES.

Hymenoptera: FERRIÈRE, *Euplectrus* sp. n. (Euloph.), 577.

CHAGOS IS.

Hemiptera: MAMET, Coccidae, 1079.

INDO-AUSTRALIAN REGION, collectively.

Coleoptera: ZIMMERMAN, *Deretiosus* (Curc.), revision, 1764.

Lepidoptera: CORBET, Rhopalocera, Linnean species, I, II, 374.

ASIA, TROPICAL AND EASTERN.

Insecta: MASAKI, Southern Islands off coast of Izu, Japan, 1098; ZEUNER, geology, climate and faunal distribution, Malay Archipelago, 1760.

Coleoptera: CHEN, Chlamydinae (Cryptocceph.), China, revision, 287; Eumolpidae, China, 290; CHÛJÔ, Chrysomelidae, Sikoku I., Japan, 303; Chrysomelids, N. Korea, 304; Buprestids, N. Korea, 305; Coccinellids, S. Manchuria, 306; Coccinellids, Korea, 307; Coccinellids, Centr. Japan, 308; Erotylids, Japan, 313; Phytophaga, Korea, III-V, 316; CHÛJÔ & MATUDA, Buprestids, Kyushu, Japan, 317; FUKUDA, Chrysomelids, Japan, 645; GRESSITT, Rhipiphoridae, China, revision, 712; Longicorns, Thailand, 713; HINTON, *Stenelmis* (Elmid.), China, key, 802; KÔNO, Attelabinae, Apoederinae, Rhynchitinae (Curc.), Manchukuo, 971; MARSHALL, *Endaeus* (Curc.), key, India, 1087; Brachyderinae, Otiorrhynchinae, Eremninae, Sitoninae (Curc.), Burma, 1089; MURAYAMA, Scolytids, Manchukuo, 1171;

SAWADA, Valginae, Japanese Empire, II, revision (Ceton.), 1387; *Phyllopertha* (Rutel.), Japan, revision, 1388; TAKEUCHI, Erotylidae, N.E. Japan, 1526; YANO, Carabidae, Korea, list, 1741.

Hymenoptera: DONISTHORPE, *Crematogaster*, subgen. *Physocrema*, list and key, 508; MASI, Chalcids from Botel-Tobago I., 1099; MENOZZI, Formicids, Tsushima and Kyûshû Is., Japan, 1120; MICHENER, *Acerataspis* (Ichn.), revision, 1128; *Metopius* (Ichn.), C. & S. China, 1130; NIXON, *Rhaconotus* (Bracon.), India, 1196; PRUTHI & MANI, Chalcidoids, India, 1297; UCHIDA, Polysphinctini (Ichn.), Japan, 1601; YASUMATSU, Formicids, Yaeyama I., Japan, 1747; *Andrena* (Apid.), Far East, list, 1749.

Lepidoptera: CORBET, Rhopalocera, Malaya, 370, 373; Rhopalocera, Hong Kong, list (concl.), 371; *Catapacilma* (Lycaen.), revision, 376; *Arrhopala* (Lycaen.), Indo-Malayan spp., key, 378; EVANS, *Erionota* (Hesp.), revision, 560; INOUE, Geometrids, Kyushu, Japan, 872; PEN, Rhopalocera, W. China, list, 1251; SCOTT, Sphingidae, Darjeeling, Sikkim, 1416; SIBATANI, *Satyra* spp., East Asia, 1441; TALBOT, *Idea* (Danaid.), revision, 1528; WYNTER-BLYTH, butterflies, Simla, addenda to list, 1738.

Trichoptera: MOSELY, India, revision (contd.), 1164.

Diptera: COLLIN, Pipunculidae, Empidae, Ussuri, 352; KATO, Muscinae, Hokkaido, Japan, 922; TAKAHASHI, *Culicoides* (Ceratop.), Manchukuo, 1524; TOKUNAGA, Ceratopogonids, Manchuria, 1564; YAO & WU, *Phlebotomus*, China, revision, 1741a, 1742; ZUMPT, Stomoxydinae, list, 1768.

Hemiptera: DOI & TANAKA, *Eurydema* (Pent.), Korea, 500; FRASER, Cicadidae, N. Bengal and Sikkim (contd.), 628; HAFIZ & RIBEIRO, Plataspinae, 725; HOFFMANN, aquatic Hem., China, Indo-China, Formosa, Korea, 812; HUTCHINSON, Corixidae, India and adjacent regions, revision, 869; MILLER, Reduviidae, Malaya, 1138; TAKAHASHI, Coccids, Hindu-kush Expedition, supplement, 1516; Aphids, Formosa, VI, 1518; Lacciferidae (Coccid.), Siam, 1521.

Thysanoptera: KUROSAWA, Miyakezima, Japan, 990.

Odonata: DOI, Cordulinae, Korea, 498; *Sympetrum*, Korea, 499; FRASER, Darjeeling and Jalpaiguri districts and Sikkim, 626; KOBAYASHI, Anisoptera, Kansai district, 960; OKUMURA, Kita-Daitojima, Borodino Is., Japan, 1209.

Orthoptera: KITAO, Tettigoniidae, Gryllidae, Wakayama Prefecture, 939.

ASIATIC ARCHIPELAGO.

Coleoptera: ANDREWES, *Chlaenius* (Carab.), Java, key, 41; CAMERON, Staphylinids, Philippines, 247; PIC, *Polemiosilis* spp. n. (Teleph.), Philippines, 1267; WITTMER, Philippine Malacodermata in Amsterdam Zool. Mus., 1721; ZIMMERMAN, *Manilabaris* gen. et sp. n. (Curc.), Philippines, 1762; *Deretiosus* (Curc.), Philippines, Java, Sumatra, 1764.

Hymenoptera: BEQUAERT, hornets (Vespiniae), Philippines, 128; BETREM, Scoliidae, Celebes, 138; CHEESMAN, Cryptini, Neth. Indies, 286; DONISTHORPE, new Formicids, 505; *Crematogaster* sp. n., Philippines, list and key of spp. of subgen. *Physocrema*, 508; HAUPT, Pompilidae, Borneo, 746; VAN DER VECHT, *Ropalidia* (Vesp.), revision, 1636; CORBET, *Tanaecia* (Nymph.), Malaya, revision, 367; Pieridae, Mentawai Is., 368; *Horaga* (Lycaen.), Malaya, revision, 375; *Catapacilma* (Lycaen.), revision, 376; *Arrhopala* (Lycaen.), key, Indo-Malayan spp., 378; EVANS, *Erionota* (Hesp.), revision, 560; TALBOT, *Idea* (Danaid.), revision, 1528; TOXOPEUS, butterflies, Java, 1578.

Diptera: HERING, *Rioxa* sp. n. (Trypet.), Philippines, 778; PARENT, *Thinophilus* sp. n. (Dolichop.), Philippines, 1225; ZUMPT, Stomoxydinae, list, 1768.

Hemiptera: MILLER, Reduviidae, Malaya, 1138; RUSSELL, *Asterolecanium* (Cocc.), spp. n., Philippines, 1371.

Odonata: NEEDHAM & GYGER, Philippines, 1183.

Orthoptera: BEY-BIENKO, Blattodea, Philippines, 105; REHN, Acrididae, Philippines, revision, 1324.

PAPUAN SUB-REGION.

BISMARCK ARCHIPELAGO.

Coleoptera : BRYANT, *Psylliodes* spp. n. (Haltic.), New Britain, 214; HINTON, *Teredolaemus* sp. n. (Colyd.), New Britain, 797; MARSHALL, *Exophthalmida* sp. n. (Curc.), New Ireland, 1092; VAN ZWALUWENBURG, *Dioxypterus* sp. n., New Britain, *Simodactylis* sp. n., Admiralty Is. (Elat.), 1623.

Diptera : HERING, *Sophira* sp. n., *Staurella* sp. n. (Trypet.), 778.

MOLUCCAS.

Diptera : HERING, *Heracinia* sp. n. (Trypet.), Amboina, 778.

Hemiptera : DRAKE & POOR, new Tingids, Amboina, 521; MILLER, *Tiarodes* sp. n. (Reduv.), Halmahera I., 1137; RUSSELL, *Asterolecanium* (Cocc.) sp. n., Amboina, 1371.

NEW GUINEA.

Insecta : TOXOPEUS, expedition to N. Guinea, 1580.

Coleoptera : ARROW, new Melolonthids, 49; *Onthophagus* spp. n. (Copr.), 50; *Papuana* sp. n. (Dynast.), 52; BRYANT, new Halticids, 214; KASZAB, *Lypros* sp. n. (Tenebr.), 920; *Epiphaleria* sp. n. (Tenebr.), 921; VAN ZWALUWENBURG, *Conoderus* sp. n. (Elat.), 1623.

Hymenoptera : DONISTHORPE, new Formicids, 504-507, 509, 511, 515; HAUPT, *Macromeris* spp. n. (Pompil.), 746; VAN DER VECHT, *Ropalidia* (Vesp.), 1635.

Lepidoptera : CARPENTER, *Euploea* sp. n. (Goodenough I.), *guérini* f.n., 260; DIAKONOFF, new Tortricids, 488; TOXOPEUS, *Coscinocera* (Saturn.), 1579; Rhopalocera, distribution, 1581.

Diptera : ALEXANDER, Tipulidae, pt. 4, 30; BONNE-WEPSTER, *Aedes* sp. n. (Culic.), 173; HERING, new Trypetids, 778.

Mallophaga : CLAY, *Goniodes* sp. n., 334.

SOLOMON IS.

Coleoptera : ARROW, *Glycyphana* sp. n. (Ceton.), 51; BRYANT, new

Halticids, Galerucid, 214; MARSHALL, *Exophthalmida* spp. (Curc.), 1092; VAN ZWALUWENBURG, new Elateridae, 1623.

Hymenoptera : DONISTHORPE, *Paratrechina* sp. n. (Formic.), 506; FERRIÈRE, *Euplectromorpha* sp. n. (Euloph.), 577.

Neuroptera : BANKS, *Bornia* sp. n. (Myrmel.), 73.

Diptera : PARENT, new Dolichopodids, 1225.

Mallophaga : THOMPSON, *Dennyus*, *Degeeriella* spp. n., 1547.

THURSDAY I.

Hymenoptera : VAN DER VECHT, *Ropalidia variegata* subsp. n. (Vesp.), 1636.

AUSTRALIA.

Coleoptera : ARMSTRONG, *Neoanthrenus* gen. et spp. n. (Dermest.), 48; ARROW, new Dynastids, 52; BROOKS, Buprestidae, N. Queensland, 194; CARTER, *Austrolimnius*, *Notriolus* (Parn.), key, *Nyctozeilus* sp. n. (Tenebr.), 267; KASZAB, *Schizophthalmotribolium* gen. et sp. n. (Tenebr.), 921.

Hymenoptera : CLARK, Formicidae, 324, 325; DONISTHORPE, *Notoncus* (Formic.) sp. n., 505; GIRAULT, new Torymids, Miscogasterid, 688; new Elasmidae and Eucharidae, 689; *Zamenhofella* gen. et sp. n. (Encyrt.), Qd. Nat. 11 p. 133; VAN DER VECHT, *Ropalidia* (Vesp.), revision, 1636.

Lepidoptera : EVANS, *Oncopera* (Hepial.), Tasmania, 551; TURNER, Oecophoridae, revision, 1593; new genn. et spp. n., 1594; Heliodinidae (Tin.), revision, 1595; WATERHOUSE, *Anisynta* sp. n. (Hesper.), *Hesperilla donnysa* subsp. n., 1669; *Ogyris zosine*, *genoveva* subsp. n. (Lycaen.), 1672.

Neuroptera : BANKS, new Chrysopidae, 77.

Mecoptera : CARPENTER, *Apteropanorpa* gen. et sp. n., Tasmania, 257,

Diptera: ALEXANDER, *Sigmatomera* sp. n. (Tip.), 29; HARDY, Tabanids, Asilids, Cyrtids notes; *Apiocera* spp. n., revision of subfam. Lomatinae (Bombyl.), 732; MACFIE, *Culicoides* sp. n. (Ceratop.), 1062; MALLOCH, Chloropidae, 1076; PARENT, new Dolichopodids, 1225; WOODHILL & PASFIELD, Culicines, illustrated key, 1730.

Thysanoptera: MORISON, *Oxythrips* sp. n., 1157; STEELE, *Isochaetothrips* spp. n., 1479; *Desmothrips*, Australia, revision, 1480.

Hemiptera: EVANS, Jassoidea, new spp., 553, 557; HARDY, Pentaloniina (Aphid.), 733; HARRIS & DRAKE, *Mesovelis* sp. n., 741; RUSSELL, *Asterolecanium* (Cocc.), spp. n., 1371; USINGER, *Chelonoderus* gen. et sp. n. (Arad.), 1615; ZECK, *Myzus ornatus*, *Rhopalosiphum rufomaculatum* (Aphid.), new to fauna, 1757.

Mallophaga: WERNECK & THOMPSON, Boopidae on marsupials, 1684.

Embiopoda: DAVIS, *Oligotoma*, list, 446.

Collembola: WOMERSLEY, *Isotobrya*, sp. n., 1725.

AMERICA, collectively.

Coleoptera: DENIER, Meloidae, catalogue, 466.

Hymenoptera: BEQUAERT, *Monobia* (Vesp.), revision, 125; GAHAN, *Monodontomerus* (Torymid.), revision, 662.

Lepidoptera: D'ALMEIDA, *Phoebis* (Pier.), revision, 34.

Diptera: CURRAN, *Mallota* (Syrph.), key, 419.

Hemiptera: PELÁEZ, *Platycentrus* (Membr.), revision, 1250; DE LA TORRE BUENO, *Harmostes* (Corix.), preliminary revision, 1569.

Odonata: BYERS, *Progomphus*, revision, 240.

Orthoptera: REHN, Eumastacinae, revision, 1323.

NORTH AMERICA.

Insecta: COCKERELL, Lower California, 344.

Coleoptera: BARR, *Acmaeodera* (Bupr.), lists of spp. in southwestern and adjoining states, U.S.A., 85; BLACKMAN, *Hylastes* (Scolyt.), 144; BLACKWELDER, *Trigonurus* (Staph.), key, 145; BLAISDELL, *Trichochroides* (Dasyt.), revision, 152; BRIMLEY, Cerambycidae, Prince Edward county, list, 190; CHAMBERLAIN, Scolytidae, Platypodidae, monograph, 280; DILLON, L. S. & E. S., Monochamini (Lamiid.), revision, 490; DOBZHANSKY, *Hyperaspis* (Coccinell.), revision, 491; HELFER, *Buprestis*, revision, 763; HENDERSON, *Listronotus* (Curc.), revision, 771; JOHNSON, Eumolpinae, Chrysomelinae, S. Dakota, 902; LEECH, *Matus* (Dytisc.), revision, 1008; LINSLEY, Methiini (Cerambyc.), revision, 1028; MALKIN, New York State, additions, 1072; N. Jersey, additions, 1073; PIERCE, *Exema* (Cryptoceph.), key, 1273; THOMAS, Elateridae, Pennsylvania, 1544; WHITE, *Nodonota* (Eumolp.), key, 1691; WRIGHT & WHITEHOUSE, Cincinnati, additions to list, 1734.

Hymenoptera: BEQUAERT, *Pseudodynerus* (Vesp.), revision, 126; Vespinae, additions, corrections, II, 127; BUREN, Formicidae, Iowa, preliminary list, 229; BUZICKY, *Chyphotes* (Mutill.), revision, 239; CREIGHTON, *Stigmatomma* (Formic.), revision, 409; LANHAM, *Andrena* (Apid.), Boulder, Colo., key, 1003; LINSLEY, *Oreopasites* (Apid.), revision, 1031; MALLIS, ants, California, list, 1074; MICHENER, Osmiinae (Apid.), generic revision, 1129; REES & GRUNDMANN, Formicidae, Utah, list, 1317; SANDHOUSE, *Halictus*, subgen. *Halictus* (Apid.), revision, 1382; SCULLEN, *Eucerceris* (Spheg.), revision, 1418; SMITH, Formicidae, Washington State, list, 1451; TIMBERLAKE, *Diadasia* (Apid.), key, 1554; WALLACE, Miscogasterids, catalogue, 1659.

Lepidoptera: BUSCK, Tortricidae, key to subfam., 235; CLARK, *Colias* (Pier.), 319; *Danarus plexippus*, key to subsp., 321; CLARKE, Oecophoridae (Tin.), revision, 330; *Arachnis* (Arct.), revision, 331; KLOTS, *Crambus* (Pyr.), California, 945; *Colias*, *Brenthis*, *Crambus*, arctic-alpine distribution, Rocky Mts., 946; *Argyrotoxa forskaleana*, *Tortrix unifasciata* (Tortric.), European spp. new to N. America, 947; MACY AND SHEPARD, handbook of

butterflies, 1069; TILDEN AND MANSFIELD, California, 1552; WAGNER, Rhopalocera, Columbia district, 1650.

Trichoptera: ROSS, 1363.

Neuroptera: BICKLEY, Chrysopidae, Tennessee, 142.

Diptera: ALEXANDER, Tipulidae, Great Smoky Mts. National Park, Tennessee, 19; BOHART, *Physocephala* (Conop.), revision, western U.S.A., 165; CARPENTER, mosquitos, Arkansas, 262; CURRAN, *Mallophora* (Asil.), key, 423; CURTIS, *Culicoides* (Ceratop.), Br. Columbia, preliminary list, 424; GAZIER, Apiceratidae, revision, 674; HUCKETT, *Pegomyia* (Musc.), revision, 848; IRWIN, Culicinae, Michigan, preliminary list, 874; JAMES, Geosarginae (Strat.), revised key to genus, 889; ASILIDAE, Colorado, 890; OUELLET, Quebec, additions, 1217; PHILIP, Tabanidae, 1263; SEEVERS, *Haplo-pogon* (Asil.), revision, 1295; SABROSKY, *Hippelates* (Chlorop.), key, 1373; *Ectecephala* (Chlorop.), revision, 1374; SNYDER, Mydaeini, revision, 1457; TELFORD, Syrphidae, Minnesota, 1535; WILCOX, *Heteropogon* (Asil.), key, 1700; WILCOX & MARTIN, *Dioctria* (Asil.), revision, 1701.

Siphonaptera: FOX, Eastern U.S., 611; HUBBARD, Pacific north-west, check-list, 840; *Meringis*, revision, 841; *Malaraeus*, revision, 842; *Micropsylla*, revision, 846; KOHLS, spp. infesting wild hares and rabbits, 964.

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Fornasinius see *Goliathus*.

Genuchus crassipes, felix, brevitarsis, rubrocinctus see *Ogmothorax*.

Glycyphana fasciata F. (= *Pseudoprotactia stolata* Burm.) p. 77; *quadricolor* Wied. (= *huyghei* Bourg.); *nepalensis* Kr. (= *roquesi* Bourg.); *nico-barica* Jans. (= *minima* Bates); *banghaasi* Bourg., *robusta* Mohn. probably synonyms of *vernalis* Wall. p. 78; *incongrua* Jans. (= *Oxyctonia costigera* Bourg.); *maculiceps* Moser (= *disparilis* Arrow); *magnifica* Moser, *rubripes* M. colour phases of *papua* Wall.; *francolina* Burm. (= *Astraea moseri* Bourg., *simillima* B. & other names) p. 79; *aurora* sp. n. Solomon Is. p. 84, ARROW Ann. Mag. n. H. (11) 8.—*G. fucata* see *Protaetia rana*.

Gnathocera trivittata Swed. (= *pro-pingua* Bourg.) p. 76, ARROW Ann. Mag. n. H. (11) 8.

Gnorimus oksukae see *Trichius*.

Goliathinus see *Goliathus*.

Goliathus Lam. (= *Goliathinus* Westw., *Fornasinius* Bertol., *Myctoplerus* Fairm., *Argyrophegges* Kraatz, *Hegemus* Thoms., probably *Sphyrorrhina* Nickerl) p. 74; *fornasinii* Bert. (= *Myctoplerus proboscideus* Fairm.) p. 76, ARROW Ann. Mag. n. H. (11) 8.

Hegemus see *Goliathus*.

Hyphelithia see *Ischnotarsia*.

Ischnotarsia Kr. (= *Hyphelithia* Kr.) p. 78, ARROW Ann. Mag. n. H. (11) 8.

Macronota quadrilineata Hope (= *aubaili* Bourg.); *furcata* Fairm. (= *argodi* Bourg.) p. 79; *schonfeldti* Kr. (= *formosana* Nijj. & Mats.); *eximia* Pahang p. 80, *rotundicollis* p. 81, *coorgica* p. 82 S. India, *ovaliceps* Burma p. 83 spp. n., ARROW t.c.

Mazoe Pér. (= *Trapezorrhina* Haus.), *albonotata* Pér. (= *sordida* Haus.) p. 76, ARROW t.c.

Myctoplerus see *Goliathus*; *M. proboscideus* see *G. fornasinii*.

Myoderma latipennis Sierra Leone p. 84, *striata* Tanganyika p. 85, spp. n., ARROW Ann. Mag. n. H. (11) 8.

Neoranzania n. n. for *Ranzania* Bertol. nec Nardo (Pisces) p. 256, DISTANT Ins. transvaal. 1911.

Nipponovalgus gen. n. for *Dasyvalgus angusticollis* Waterh. (type) p. 8; *yonakuniensis* sp. n. Loochoo Is. p. 10 figs., SAWADA Nippon no Kôchû 4.

Ogmothorax crassipes Arrow, *felix* A., *brevitarsis* Moser, *rubrocinctus* Bourg. from *Genuchus* p. 77, ARROW Ann. Mag. n. H. (11) 8.

Oxycetonia costigera see *Glycyphana incongrua*.

Pachnoda massajae Gestro distinct from *thoracica* F. p. 76, ARROW Ann. Mag. n. H. (11) 8.

Paratrichius osimannus sp. n. Japan p. 35 fig., CHÛJÔ Trans. n. H. Soc. Formosa 31. [Original not seen.]

Pileotrichius podicalis Kr. (= *burgeoni* Bourg.); *austerus* Bourg. (= *so-brinus* Arrow) p. 77, ARROW Ann. Mag. n. H. (11) 8.

Pilinurgus squamosus Moser (= *hulstaerti* Bourg.) p. 77, ARROW t.c.

Pogonotarsus flavovirgatus see *Zebinus flavolimbalis*.

Polyplastus ovatus Wat. (= *aequicostatus* Bourg.) p. 77, ARROW Ann. Mag. n. H. (11) 3.

Potosia grisea see *Protaetia culta*; *salvazai*, *morgoni* see *Protaetia auripes*.

Protaetia cariana Gestro (= *albovermiculata* Bourg.); *rana* Arrow (= *Glycyphana fucata* Bourg.); *caudata* Arrow (= *Cetonia chalcitis* Bourg.); *fusca* Hbst. (= *taiwana* Nijj. & Mats.); *hondana* Arrow ♂ of *lenzi* Har.; *culta* Wat. (= *Potosia grisea* Nijj. & Mats.); *auripes* Hope (= *Potosia salvazai* Bourg., *P. morgoni* Bourg.) p. 79, ARROW Ann. Mag. n. H. (11) 8.

Pseudoproteaetia burmeisteri n. n. for *stolata* Burm. nec F. p. 77, ARROW t.c.—*P. stolata* see *Glycyphana fasciata*.

Psilocnemis valid gen. not synonym of *Genuchinus* p. 122; *leucosticta* Burm. description p. 123, CAZIER Bull. Brooklyn ent. Soc. 35 1940.

Pygora versicolor see *Euchilia*.

Ranzania see *Neoranzania*.

Rhomborrhina heros G. & P. (= *chatenayi* Bourg.) & a var. of *resplendens* Swartz; *fortunei* Saund. (= *nitida* Bourg.); *subopaca* Arrow (= *vuilleti* Bourg.) p. 78, ARROW Ann. Mag. n. H. (11) 8.

Rhynchocephala rufoscutata see *Doryscelis*.

Sphyrorrhina see *Goliathus*.

Stichothyrea guttifera Afzel (= *mutabilis* Bourg.) p. 77, ARROW Ann. Mag. n. H. (11) 8.

Thaumastopeus nicobaricus Jans. (= *nigrovirens* Bourg.); *pullus* Billb. incorrectly called *nigratus* in Junk catalogue p. 79, ARROW t.c.

Trapezorrhina see *Mazoe*.

Trichius bifasciatus Moser (= *vuilleti* Bourg.) p. 77; *oksukae* Nijj. and Mats. from *Gnorimus* and perhaps var. of *donitzi* Harr. p. 80, ARROW Ann. Mag. n. H. (11) 8.—*T. miwai* sp. n. Formosa p. 37 fig., CHÛJÔ Trans. n. H. Soc. Formosa 31 [original not seen].

Valgus pictus subsp. n. *taiwanus* p. 6, *sikokuensis* p. 7 Japan; *lactus* Arr. p. 6, *fumosus* Lew. p. 7 from *Chromovalgus* and subsp. of *pictus* (key to subsp. p. 5), SAWADA Nippon no Kôchû 4.

Zebinus flavolimbialis Fairm. (= *Pogonotarsus flavovirgulatus* Fairm.) p. 77, ARROW Ann. Mag. n. H. (11) 8.

CURCULIONIDAE.

Attelabinae, Apoderinae and Rhynchitinae of Manchukuo, Kôno Ins. matsum. 15 pp. 75-79.

Key to Samoan Cossoninae, ZIMMERMAN Occ. Pap. Bishop Mus. 16 pp. 174-175.

Acanthobrachium fici p. 700, *helico-stylis* p. 701, *gounellei* p. 702, spp. n. Brazil, HUSTACHE Rev. Ent. Rio de J. 11.

Acicnemis bauhiniae sp. n. India p. 191, MARSHALL Ann. Mag. n. H. (11) 7.

Acythogaster gen. n. for *Acythopeus babaulti* Hust. in pp. 92-113, HELLER Arb. morph. taxon. Ent. Berl. 7 1940 [original not seen].

Acythopeus Pasc., *tristis* Pasc. designated type p. 317, ZIMMERMAN Philipp. J. Sci. 73 1940.—*A. babaulti* see *Acythogaster*.

Acythophanes gen. n. (Baridini) [2 new spp. Borneo, Sumatra, original not seen] in pp. 92-113, HELLER Arb. morph. taxon. Ent. Berl. 7 1940.

Alphitopis from Hylobiinae to Cleoninae p. 344, MARSHALL Ann. Mag. n. H. (10) 9 1932.

Ancylorrhynchus trapezicollis further description p. 698, HUSTACHE Rev. Ent. Rio de J. 11 1940.

Aoromius revision 6 (1939) pp. 341-349, 7 (1940) pp. 17-32 [not seen], characters 6 p. 344, key p. 345; catalogue of ff. and synonyms 7 pp. 17-32 [not seen], FRANZ Arb. morph. taxon. Ent. Berl.

Apion taylori sp. n. Uganda p. 38, MARSHALL Ann. Mag. n. H. (11) 8.—*A. lacertense* sp. n. England p. 14, TOTTENHAM Ent. mon. Mag. 77.

Apries a good genus; *eremita* Pasc. p. 194, *palliatius* Pasc. from *Deretiosus*; *aversandus* Boh. from *Cryptorhynchus* p. 195, ZIMMERMAN Occ. Pap. Bishop Mus. 16.

Aristoxenus gen. n. for *Deretiosus lateripennis* Lea (type) p. 197, *sanctus* Lea p. 208, ZIMMERMAN t.c.

Athesapeuta varicolor sp. n. p. 46 (with var. n. *subcalva*, *atronuda* p. 47) Uganda; *semirubra* Hust. from *Titanobaris* p. 48, MARSHALL Ann. Mag. n. H. (11) 8.

Bactrius from Hylobiinae to Leptopinae p. 344, MARSHALL op. cit. (10) 9 1932.

Balanephagus attaleae further description p. 699, HUSTACHE Rev. Ent. Rio de J. 11 1940.—*B. gica* sp. n. Brazil p. 851, BONDAR Rev. Ent. Rio de J. 11 1940.

Baris cariceps sp. n. Uganda p. 44 fig., MARSHALL Ann. Mag. n. H. (11) 8.—*B. serraticollis* Hust. good sp. p. 4, HUSTACHE Bull. Soc. linn. Lyon 10.

Burmotragus gen. n. for *Sympiezomias metallescens* Mshl. (type), *S. similis* Mshl.; *malaisei* p. 351, *affinis*, *excisiventris* p. 352 spp. n. N.E. Burma, MARSHALL Ann. Mag. n. H. (11) 8.

Calomycterus inaequalis p. 375, *nodosus* p. 377, spp. n. Burma, MARSHALL t.c.

Cechides from Hylobiinae to Cleoninae p. 344, MARSHALL op. cit. (10) 9 1932.

Cercopeus artemisiae Pierce (= *Cryptolepidus parvulus* V. Dyke) p. 145, TING Bull. S. Calif. Acad. Sci. 39 1940.

Chirozetes scutellaris Mshl. from *Phylaitis* p. 155, MARSHALL Ann. Mag. n. H. (11) 7.

Cholus quadripunctatus sp. n. Brazil p. 694, HUSTACHE Rev. Ent. Rio de J. 11 1940.

Cimbocera key to related genn. p. 130, to spp. p. 132; *buchanani* sp. n. New Mexico p. 134; *conspecta* Fall (= *albovestita* V. Dyke) p. 135 figs., TING Bull. S. Calif. Acad. Sci. 39 1940.—*C. petersoni* sp. n. U.S.A. in pp. 29-32 figs., TANNER Great Basin Nat. 2 [original not seen].—*C. cizieri* see *Cryptolepidus*; *cinerea* see *Miloderoides*; *robusta* see *Paracimbocera*.

Cionus pardus p. 28, *chilianthi* p. 29, spp. n. S. Africa, MARSHALL J. ent. Soc. Sthn. Afr. 4.

Coelosternechus philippinensis Hllr. (= *javanus* Hllr.) in pp. 92-113, HELLER Arb. morph. taxon. Ent. Berl. 7 1940 [original not seen].

Colobodes atratus Lea from *Deretiosus* p. 183; *cristatus* n. n. for *fasciculatus* Lea nec Pasc. from *Deretiosus* p. 184, ZIMMERMAN Occ. Pap. Bishop Mus. 16.—*C. lophonotus* see *Exapries*; *nodulosus*, *turbatus* see *Deretiosus*.

Conotrachelus subnotatus p. 645, *leucophrys* p. 646, *deceptor* p. 647, *bacumuchae* p. 648, *marmoreus* p. 650, *stenomus* p. 651, *sloaneae* p. 652, *uncipectus* p. 653, *scutatus* p. 655, *batesi*, *fossus* p. 656, *albidus* p. 658, *semicalvus* p. 659, *albiceps* p. 660, spp. n. Brazil, MARSHALL Rev. Ent. Rio de J. 11 1940.

Corigetus tenuicornis see *Doliophron*; *filicornis*, *ignarus*, *molitor* see *Phrixopogon*; *moratus* see *Deiradolcus*; *disjunctus* see *Crinorrhinus*.

Cotithene gen. n., *globulicollis* sp. n. Costa Rica in pp. 1-16, Voss Arb. morph. taxon. Ent. Berl. 7 1940 [original not seen].

Cratopus lateralis p. 40, *tigratus* p. 41, spp. n. Mauritius, HUSTACHE Mauritius Inst. Bull. 1 1939 pt. 5.

Crinorrhinus gen. n. for *Phytoscaphus crassirostris* Fst. (type), *P. foveifrons* Fst., *Corigetus disjunctus* Fst. p. 373; *strabo* sp. n. Burma p. 374, MARSHALL Ann. Mag. n. H. (11) 8.

Cryptolepidus key to spp. p. 145; *planifrons* p. 146, *leechi* p. 147, *rugicollis* p. 149 spp. n. U.S.A.; *cazieri* V. Dyke from *Cimbecora* pp. 132, 148 figs., TING Bull. S. Calif. Acad. Sci. 39 1940.—*C. parvulus* see *Cercopeus artemisiae*.

Cryptorhynchus aversandus see *Apries*.

Cycnotrachelus ussuriensis ♂ p. 77, Kôno Ins. mats. 15.

Cylas turcipennis, *formicarius* subsp. *elegantulus* measurements p. 206 figs., PIERCE Bull. S. Calif. Acad. Sci. 39.—*C. laevicollis* & others see *Protocylas*.

Cyphicerinus undulans sp. n. N.E. Burma p. 360, MARSHALL Ann. Mag. n. H. (11) 8.

Cyphicerus elongatus p. 357, *retusifrons* p. 359, spp. n. N.E. Burma, MARSHALL t.c.—*C. egenus* see *Oedophrys*.

Cyrtepistomus bardus sp. n. N.E. Burma p. 364, MARSHALL Ann. Mag. n. H. (11) 8.—*C. gracilicornis* see *Doliophron*.

Deiradolcus -gen. n. for *Corigetus moratus* Fst. (type), scope p. 371; *mutans* sp. n. Burma, Siam p. 372, MARSHALL Ann. Mag. n. H. (11) 8.

Deiradorrhinus gen. n. for *Pelto-trachelus isabellinus* Boh. (type), *P. illobatus* Mshl. p. 369; *virescens* sp. n. Burma p. 370, MARSHALL t.c.

Derelomus bondari further description p. 692, HUSTACHE Rev. Ent. Rio de J. 11 1940.

Deretiosoma gen. n. (Ithyporini), *overbecki* sp. n. Java in pp. 92-113, HELFER Arb. morph. taxon. Ent. Berl. 7 1940 [original not seen].

Deretiosomimus see *Deretiosus*.

Deretiosus Pasc. revision pp. 177-214; (= *Microbothrus* Fairm., *Deretiosomimus* Hllr., *Lobocodes* Hllr.); *angulicollis* Hllr. (and var. *lactifrons* Hllr.), *enganoensis* Voss, *persimilis* Voss from *Deretiosomimus*; *subverrucosus* Voss, *nigromaculatus* Voss, *dispar* Voss from *Solobrachis*; *nodulosus* Pasc., *turbatus* Faust (= *amplipennis* Lea) from *Colobodes*; *aridus* Pasc. (= *a. blandus* Lea, *zopherus* Lea) p. 180; *verrucifer* Faust (= *pustulosus* Lea); *squamituber* Fairm. from *Microbothrus* p. 181 figs., ZIMMERMAN Occ. Pap. Bishop Mus. 16.—*D. ziczac* see *Storeus*; *tibialis* see *Perrhaebius*; *parvus*, *setosus* see *Ocoblodes*; *intercoxalis* see *Exapries*; *aspratilis* see *Eprias*; *atratus* see *Colobodes*; *fasciculatus* see *C. cristatus*; *lateripennis*, *sacatus* see *Aristoxenus*; *palliatu*s, *eremita* see *Apries*.

Dermatozenus marmoreus sp. n. N.E. Burma p. 346, MARSHALL Ann. Mag. n. H. (11) 8.

Dinichus from *Hylobiinae* to *Rhy-parosominae* p. 344, MARSHALL op. cit. (10) 9 1932.

Doliophron gen. n. for *Cyrtepistomus gracilicornis* Fst. (type), *Corigetus tenuicornis* Fst. p. 365, MARSHALL op. cit. (11) 8.

Dorytomus rubidus sp. n. Utah in pp. 31-32, TANNER Great Basin Nat. 1 1939 [original not seen].

Echinocnemus maestus p. 22, *cervinus* p. 23, *rufitarsis* p. 25, *angusticollis*, *torvus* S. Rhodesia, *plagiatus* Portuguese E. Africa p. 24, spp. n.; *inquinatus* Gylh. synonymy discussed; key p. 27, MARSHALL J. ent. Soc. Sthn. Afr. 4.

Ellimenistes graminum sp. n. Transvaal p. 19, MARSHALL t.c.

Endaeus key to Indian spp. p. 184; *buteae* p. 185, *echinatus* p. 186, *piger* p. 187, *ater*, *gilvus* p. 188, *elusus* p. 189, *strictus*, *ligatus* p. 190, spp. n. India, MARSHALL Ann. Mag. n. H. (11) 7.

Epiculus shanensis sp. n. Burma p. 354, MARSHALL op. cit. (11) 8.

Eprius aspratilis Lea from *Deretiosus* p. 207, ZIMMERMAN Occ. Pap. Bishop Mus. 16.

Eptacus horni sp. n. Syria p. 316, LONA Arb. morph. taxon. Ent. Berl. 6 1939.

Eugnathus pyriformis sp. n. N.E. Burma p. 378, MARSHALL Ann. Mag. n. H. (11) 8.

Euonychus conorrhinus sp. n. Uganda p. 35, MARSHALL t.c.

Eupagoderes utahensis, *hardyi* spp. n. Utah in pp. 31-32, TANNER Great Basin Nat. 1 1939 [original not seen].

Eusomus smaragdulus Fairm. good sp. p. 6, HUSTACHE Bull. Soc. linn. Lyon 10.

Exapries intercoxalis Lea from *Deretiosus* p. 184; *lophonotus* Mshl. from *Colobodes* p. 186, ZIMMERMAN Occ. Pap. Bishop Mus. 16.

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Geotragus inflatus Fst., *setosus* Aur. from *Sympiezomias* p. 348, MARSHALL Ann. Mag. n. H. (11) 8.

Homalocerus antennalis sp. n. Brazil p. 697, HUSTACHE Rev. Ent. Rio de J. 11 1940.

Hoplopactus leucospilus Germ. from *Leptocerus* p. 337, VOSS Arb. morph. taxon. Ent. Berl. 6 1939.

Hoplorrhinus testaceus p. 694, *bi-punctatus* p. 695, *unicolor* p. 696, spp. n. Brazil, HUSTACHE Rev. Ent. Rio de J. 11 1940.

Hyperstylus lineatus sp. n. Punjab p. 406, MARSHALL Bull. ent. Res. 31.

Indomias gen. n. for *Sympiezomias* *prasinus* Boh. (type), scope p. 350, MARSHALL Ann. Mag. n. H. (11) 8.

Ischnobrotus rhombifer sp. n. Uganda p. 33 fig., MARSHALL t.c.

Lalagetes inaequalis sp. n. Cape Province p. 20, MARSHALL J. ent. Soc. Sthn. Afr. 4.

Leptocerus leucospilus see *Hoplopactus*.

Linomadarus sylvaticus sp. n. Brazil p. 705, HUSTACHE Rev. Ent. Rio de J. 11 1940.

Listronotus revision of N. American spp. pp. 215-337, key p. 232; *ingens* p. 243, *manifestus* p. 269, *distinctus* p. 274, *blatchleyi* p. 279, *blandus* p. 282, *similis* p. 304, *insignis* p. 313, spp. n. U.S.A.; *oregonensis* Lec. (= *rudipennis* Blatch.) p. 288; *nebulosus* Lec. (= *sulcirostris* Lec.) p. 301; *appendiculatus* Boh. (= *floridensis* Blatch., *leuczonatus* Chitt., *impressus* V. Dyke) p. 306 figs., HENDERSON Kans. Univ. Sci. Bull. 26 1940.

Lixus silvestris sp. n. Uganda, Kenya p. 37, MARSHALL Ann. Mag. n. H. (11) 8.

Lobocodes see *Deretiosus*.

Macrancylus meridianus sp. n. Samoa p. 172 figs., ZIMMERMAN Occ. Pap. Bishop Mus. 16.

Madarus rectirostris see *Orthomadarus*.

Manilabaris gen. n. (Barinae) p. 314, *cucurbitae* sp. n. Manila p. 315 fig., ZIMMERMAN Philipp. J. Sci. 73 1940.

Mecinus echinatus Desbr. good sp.; *dorsalis* var. n. *alpinus* France p. 5, HUSTACHE Bull. Soc. linn. Lyon 10.

Mecistocerus lineicollis sp. n. Uganda p. 41, MARSHALL Ann. Mag. n. H. (11) 8.

Mecopus carpenteri sp. n. Uganda p. 42, MARSHALL t.c.

Miarus wagneri sp. n. Greece p. 161, SZÉKESSY Ann. Mus. nat. Hungar. (Zool.) 33 1940.

Microbothrus see *Deretiosus*.

Microzurus vinosus sp. n. Brazil p. 704, HUSTACHE Rev. Ent. Rio de J. 11 1940.

Miloderes argenteus see *Miloderoides cinereus*.

Miloderoides cinereus V. Dyke from *Cimbocera* pp. 132, 142 (= *Miloderes argenteus* V. Dyke) p. 143 figs., TING Bull. S. Calif. Acad. Sci. 39 1940.

Mimaulus thesii S. Rhodesia p. 15, *humeralis* Portuguese E. Africa p. 16, spp. n., MARSHALL J. ent. Soc. Sthn. Afr. 4.

Minyops from Hylobiinae to Rhytirrhinae p. 344, MARSHALL Ann. Mag. n. H. (10) 9 1932.

Myllocerinus excisangulus see *Phrixopogon*.

Myllocerus spinicollis sp. n. Punjab p. 405, MARSHALL Bull. ent. Res. 31.—*M. striatifrons* p. 355, *brevirostis* p. 356, spp. n. N. E. Burma, MARSHALL Ann. Mag. n. H. (11) 8.—*M. convexifrons*, *setarius* see *Oedophrys*.

Naupactus opulentus sp. n. Brazil p. 335, Voss Arb. morph. taxon. Ent. Berl. 6 1939.

Neosyagrius from Hylobiinae to Rhyparosominae p. 344, MARSHALL Ann. Mag. n. H. (10) 9 1932.

Notesiaspis rubiginosa sp. n. [? La Plata] in 19–28, HUSTACHE in BRUCH Rev. Fac. Agron. La Plata 24. [Original not seen.]

Nudoderes gen. n. (Calandrinae) p. 711, *luteus* sp. n. Brazil p. 712, HUSTACHE Rev. Ent. Rio de J. 11 1940.

Ocoblodes setosus Lea p. 187, *parvus* Lea p. 195 from *Deretiosus*, ZIMMERMAN Occ. Pap. Bishop Mus. 16.

Oedophrys gen. n. for *Myllocerus convexifrons* Fst. (type) p. 361, *M. setarius* Rtr., *Cyphicercus egenus* Fst. p. 362; *rudis* p. 363, *deludens* p. 364 spp. n. Burma, MARSHALL Ann. Mag. n. H. (11) 8.

Oreopeplus callinotus sp. n. Brazil p. 370 figs., LANE & MOURE Arq. Zool. São Paulo 1 1940.

Orthomadarus gen. n. for *Madarus rectirostris* Boh. (type) p. 707; *rectinavus* sp. n. Brazil p. 708, HUSTACHE Rev. Ent. Rio de J. 11 1940.

Otiorrhynchus diversicollis sp. n. Ligu-ran Appennines p. 315, LONA Arb. morph. taxon. Ent. Berl. 6 1939.

Palaeocorynus vinsoni sp. n. Mauritius p. 42, HUSTACHE Mauritius Inst. Bull. 1 1939 pt. 5.

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Paracimbocera robusta V. Dyke from *Cimbocera* pp. 132, 140; *artemisiae* sp. n. U.S.A. p. 139 figs., TING Bull. S. Calif. Acad. Sci. 39 1940.

Paracythopeus gen. n. (Baridini), 2 new spp. Sumatra, Tonkin [original not seen] in pp. 92–113, HELLER Arb. morph. taxon. Ent. Berl. 7 1940.

Parexophthalmus vitiensis sp. n. Fiji p. 54, MARSHALL Proc. R. ent. Soc. Lond. (B) 10.

Parisoschoenus botryophorae sp. n. Brazil p. 710, HUSTACHE Rev. Ent. Rio de J. 11 1940.

Peltotrachelus isabellinus, *illobatus* see *Deiradorrhinus*.

Pempheres affinis & other spp. see *Pempherulus*.

Pempherulus gen. n. for *Pempheres affinis* Fst., key to allied genn. p. 194; scope p. 195, MARSHALL Ann. Mag. n. H. (11) 7.

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Phyllaitis some spp. see *Pempherulus*; *P. scutellaris* see *Chirozetes*.

Phyrdenus pallidisignatus sp. n. [? Brazil] p. 340, Voss Arb. morph. taxon. Ent. Berl. 6 1939.

Phytoscapus crassirostris, *foveifrons* see *Crinorrhinus*.

Phytotribus platyrhinus, *attileae* spp. n. Brazil p. 693, HUSTACHE Rev. Ent. Rio de J. 11 1940.

Piazurus bondari sp. n. Brazil p. 703, HUSTACHE t.c.

Piezotrachelus abutilonis sp. n. Uganda p. 39 fig., MARSHALL Ann. Mag. n. H. (11) 8.

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Chrysilis Westw. type designated *valens* F. p. 434, HEMMING t.c.—See *Anteros*.

Dodona eugenes subsp. n. *chaseni* Pahang; *egeon* subsp. n. *confluens* Selangor p. 811, CORBET J.F.M.S. Mus. 18.

Ethelida Westw. type designated *heliconides* Swains. p. 434, HEMMING J. Soc. Bibliogr. n. H. 1.—See *Zeonia*.

Lymnas pixe sexpunctata f. n. *aurolutea* Mexico p. 638, HOFFMANN An. Inst. Biol. Mexico 11 1940.

Notheme erota Cram. (= *ouranus* Stoll) p. 436, HEMMING J. Soc. Bibliogr. n. H. 1.

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Coleophora maritella p. 91, *sparsiato-mella* p. 160, *benestrigatella* p. 162, *bidentella* p. 163, spp. n. Canada figs., McDUNNOUGH Canad. Ent. 73.

Cormotypa mitrocosma, *trigonocosma*, *rhoecosema* p. 414, *crocias*, *dolopis*, *sphodra*, *fusca* p. 415, *xanthopolia*, *metaxantha* p. 416, spp. n. Australia, TURNER Proc. Linn. Soc. N.S.W. 66.

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Cryptolechia huachucella see *Himmacia*; *humata* see *Inga*.

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Dasycera newmanella see *Mathildana*.

Depressaria keys to N. American spp. p. 165; *atrostrigella* p. 168, *leanorae* p. 178 Canada, *palousella* p. 171, *whitmani* p. 182, *yakimae* p. 185, *angustati* p. 189 U.S.A., spp. n. figs., CLARKE Proc. U.S. nat. Mus. 90 no. 3107.—*D. barberella* see *Apachea*.

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Gerdana from Oecophoridae to Blastobasidae p. 272, CLARKE Proc. U.S. nat. Mus. 90 no. 3107.

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Martyrhilda gen. n. for *Agonopterix canella* Busck (type) p. 125; key to included spp. p. 126; *sordidella* Br. Columbia p. 132, *sphaeralceae* Washington p. 138, *hildaella* N.W. Territory p. 140 spp. n. figs., CLARKE Proc. U.S. nat. Mus. 90 no. 3107.

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armatipes, *bidens*, *ariel*, *frontalis* Brazil, *panamena*, *lyrica*, *puma* Panama, *smarti* Br. Guiana, *azteca* Honduras, **spp. n.** in pp. 243-304, CURRAN Bull. Amer. Mus. n. H. 78 [original not seen].

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marshalli Natal p. 260 spp. n.; *micans* Stein (= *africana* Mall.) p. 259, VAN EMDEN t.c.

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Zeugominettia see *Setulina*.

LONGCHAEIDAE.

Lipsana gen. n. p. 676, *insulapascalis* sp. n. Easter I. p. 677 figs., ENDERLEIN Nat. Hist. Juan Fern. 3 (Zool.) 1940.

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Phytalmiinae from Ortalidae, HENNING Arb. morph. taxon. Ent. Berl. 7 1940 in pp. 58–64, 9 figs. [original not seen].

Key to genera of Dacinae of the world, HERING Bl. FruchtfliegenKunde 3 in pp. 1–25 [original not seen].

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Acanthiophilus kohleri sp. n. Kamerun in pp. 23–34, HERING Stett. ent. Ztg. 101 [original not seen].—*A. ramulosa* see *Tephritis sinensis*.

Acanthoneura melanostoma sp. n. Manchukuo in pp. 1–25, HERING Bl. FruchtfliegenKunde 3 [original not seen].—*A. ultima* sp. n. India in pp. 1–7, HERING Ark. Zool. 33B 1940 no. 11 [original not seen].—*A. insignis* see *Themaroidopsis*.

Acidoxantha nana sp. n. Timor in pp. 1–16, HERING Bl. FruchtfliegenKunde 1 1940 [original not seen].

Aciura limata see *Pseudeuleia*.

Adrama media sp. n. India in pp. 1–7, HERING Ark. Zool. 33B 1940 no. 11 [original not seen].

Anastrephoides annulifera sp. n. Manchukuo in pp. 23–34, HERING Stett. ent. Ztg. 101 [original not seen].

Asiadacus absonus sp. n. India in pp. 1–7, HERING Ark. Zool. 33B 1940 no. 11 [original not seen].

Celidodacus coloniarum var. n. *mendax* Tanganyika in pp. 1–16, HERING Bl. FruchtfliegenKunde 1 1940 [original not seen].

Cephalophysa gen. n. for *Platyparea terebratula* Ports. in pp. 1–16, HERING op. cit. 2 1940.

Chaetodacus ater sp. n. Szechwan p. 131, CHEN Sinensia 11 1940.

Chaetorellia hexachaeta var. n. *australis* Bessarabia in pp. 1–16, HERING Bl. FruchtfliegenKunde 2 1940 [original not seen].

Cladotricha albipilosa sp. n. Kenya in pp. 1-16, HERING t.c.

Cleitamiphanes gen. n., *heinrichi* sp. n. Celebes in pp. 1-25, HERING op. cit. 3.

Dacus armatus varr. n. *theophrastus* Togo, *bombastus* Mombasa, *phantoma*, *radmirus* Kamerun in pp. 1-25, HERING t.c.

Didacus basifasciatus sp. n. Br. E. Africa in pp. 1-25, HERING t.c.

Epochra lunifera sp. n. Washington in pp. 1-16, HERING op. cit. 2 1940.

Euaresia key to allied gen. in pp. 234-242, ACZEL Zool. Anz. 130 1940 [original not seen].—*E. guttata* see *Heringina*.

Euphranta maxima sp. n. Borneo in pp. 1-25, HERING Bl. Fruchtfiegen-Kunde 3 [original not seen].

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Euribia sonderupi Denmark, *tecta* Europe, *mandschurica* Manchukuo, spp. n. in pp. 1-16, HERING t.c.—*E. algerica* sp. n. [? Algeria] p. 10 fig., HERING Mitt. dtsh. ent. Ges. 10 [original not seen].

Gastrozona melanophila sp. n. Formosa in pp. 1-16, HERING Bl. Fruchtfiegen-Kunde 1 1940 [original not seen].

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Hoplandromyia buhri sp. n. Kamerun in pp. 23-34, HERING Stett. ent. Ztg. 101 [original not seen].

Ichneumonosoma heinrichi sp. n. Celebes in pp. 1-25, HERING Bl.

Fruchtfiegen-Kunde 3 [original not seen].

Mellesis citri sp. n. Szechwan p. 133, CHEN Sinensia 11 1940.—See *Tetradacus tsuneonis*.

Metidacus adenae sp. n. Kamerun in pp. 23-34, HERING Stett. ent. Ztg. 101 [original not seen].

Munroedaspis subgen. n. see *Oedaspis*.

Neorhabdochaeta gen. n., *anduzei* sp. n. Venezuela p. 124 figs., MALLOCH Bol. Soc. venez. Ci. nat. 7.

Oedaspis ragdai sp. n. Sarepta; (*Munroedaspis* subgen. n.) in pp. 1-16, HERING Bl. Fruchtfiegen-Kunde 1 1940 [original not seen].

Oedicarena diffusa see *Gymnocarena*.

Orellia pseudovirens sp. n. Cyprus in pp. 1-16, HERING Bl. Fruchtfiegen-Kunde 1 1940.—*O. oriunda* sp. n. Manchukuo in pp. 25-32, HERING op. cit. 3 [originals not seen].

Ortalopectera callistomyia sp. n. New Guinea in pp. 1-25, HERING t.c.

Oxya pulla sp. n. Manchukuo in pp. 1-16, HERING op. cit. 2 1940.

Paroxyna timorensis sp. n. Timor; *luxoriensis* n. n. for *oxynoides* Her. in pp. 1-16, HERING op. cit. 1 1940.—*P. virgata* sp. n. Manchukuo in pp. 1-16, HERING op. cit. 2 1940.—*P. ciliornis*, *dorema*, *melanchroa* Manchukuo, *separabilis* China, spp. n. in pp. 25-32, HERING op. cit. 3.

Phorelliosoma ambitiosum India, *hilaratum* Burma, spp. n. in pp. 1-25, HERING t.c.

Platyparea terebratula see *Cephalophysa*.

Plaumannimyia costaemaculata sp. n. Brazil in pp. 23-34, HERING Stett. ent. Ztg. 101 [original not seen].

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Protensina brevior, *hyalipennis* spp. n. Peru in pp. 1-16, HENNIG in HERING op. cit. 1 1940.

Pseudeuleia gen. n. for *Aciura limata* Coq. in pp. 1-16, HERING t.c.

Psilodacus ruslan sp. n. Br. E. Africa in pp. 1-25, HERING op. cit. 3.

Rhabdochaeta tribullosa sp. n. Timor in pp. 1-16, HERING op. cit. 1 1940.

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Rioxina gen. n. for *Rioxa debeauforti* de Meij. in pp. 1-25, HERING t.c.

Rioxoptilona hexacinoides see *Hexaptilona*.

Sinaida gen. n., *alini* sp. n. Manchukuo in pp. 1-16, HERING Bl. FruchtfiegenKunde 2 1940 [original not seen].

Sinotephritis melaena sp. n. Manchukuo in pp. 25-32, HERING op. cit. 3.

Sophira holoxantha sp. n. Bismarck Archipelago in pp. 1-25, HERING t.c.

Sophioides flammosa sp. n. Ceylon in pp. 23-34, HERING Stett. ent. Ztg. 101 [original not seen].

Staurella mediofusca sp. n. Bismarck Archipelago in pp. 1-25, HERING Bl. FruchtfiegenKunde 3 [original not seen].

Staurellina gen. n., *trypetopsis* sp. n. India in pp. 1-7, HERING Ark. Zool. 33B 1940 no. 11 [original not seen].

Strumeta atramentata sp. n. New Guinea in pp. 1-25, HERING Bl. FruchtfiegenKunde 3 [original not seen].

Teliophleps mandschurica sp. n. Manchukuo in pp. 288-295, HERING Arb. morph. taxon. Ent. Berl. 7 1940 [original not seen].

Tephritis shansiana n. n. for *affinis* Chen nec Snow; *sinensis* n. n. for *ramulosa* Chen nec Lw. from *Acanthophilus* p. 529, CHEN Sinensia 11 1940.—*T. conura* varr. n. *hartigi*, *ziegenhageni* Europe in pp. 23-34, HERING Stett. ent. Ztg. 101 [original not seen].

Terastiomyia from Tylinæ in pp. 58-64, HENNIG Arb. morph. taxon. Ent. Berl. 7 1940 [original not seen].

Termitorioxia improbata sp. n. New Guinea in pp. 1-25, HERING Bl. FruchtfiegenKunde 3 [original not seen].

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Tetreuaresta timida var. n. *platypteryx* Venezuela in pp. 1-16, HERING Bl. FruchtfiegenKunde 1 1940 [original not seen].

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Trupanea imitatrix see *Trypanaresta*.

Trypanaresta gen. n. for *Trupanea imitatrix* Her. in pp. 1-16, HERING Bl. FruchtfiegenKunde 1 1940 [original not seen].

Trypanea crassitarsis, *plaumanni*, *putata* spp. n. Brazil in pp. 23-34, HERING Stett. ent. Ztg. 101 [original not seen].

Trypanophion vestigiale sp. n. Celebes in pp. 1-25, HERING Bl. FruchtfiegenKunde 3 [original not seen].

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Zeugodacus bezzianus var. n. *signata* Sikkim; *nubilus* var. n. *heinrichi* Celebes in pp. 1-25, HERING op. cit. 3.

RHOPALOMERIDAE.

Key to genn. of Rhopalomeridae & subfam. Rhopalomerinae, MALLOCH Florida Ent. 24 pp. 49-50.

Kroeberia floridana see *Rhytidops*.

Rhytidops floridana Aldr. from *Kroeberia* p. 51, MALLOCH Florida Ent. 24.

ORTALIDAE

(OTITIDAE, PHYTALMIIDAE, PLATYSTOMIDAE, PYRGOTIDAE, RICHARDIIDAE, TANYPEZIDAE, ULIDIIDAE).

Aciruoides plaumanni, *fasciata* spp. n. Brazil in pp. 197-201, HERING Mitt. münchn. ent. Ges. [? 31] [original not seen].

Adapsilia alini, *dorsocentralis* spp. n. Manchukuo in pp. 288-295, HERING Arb. morph. taxon. Ent. Berl. 7 1940 [original not seen].

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Herina hennigi sp. n. Manchukuo in pp. 288-295, HERING t.c.

Parageloemyia ornata sp. n. Manchukuo in pp. 288-295, HERING t.c.

Phyalmiinae transferred to Trypetidae, q.v.

Phytalmodes status discussed in pp. 58-64, HENNIG Arb. morph. taxon. Ent. Berl. 7 1940 [original not seen].

Pterocerina paradoxa sp. n. Brazil in pp. 197-201, HERING Mitt. münchn. ent. Ges. [? 31] [original not seen].

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Revision of Australian Chloropidae, MALLOCH Proc. Linn. Soc. N.S.W. 65 1940 pp. 261-288, 26 figs.; 66 1941 pp. 41-64, 13 figs.

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Annotated list of genotypes of Chloropidae of the world, SABROSKY Ann. ent. Soc. Amer. 34 pp. 735-765.

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Botanobia key to spp. p. 41; *apicipunctata* Mall. from *Gaurax*; *latitarsis* p. 58, *nigrimana*, *brunnecapicata* p. 59, *robusta*, *flavohumeralis*, *froggatti* p. 60, *albohirta* p. 61, *tincticornis*, *communis* p. 62, *hirtipes* (Tasmania), *confluens* p. 63 spp. n. Australia; *luteicornis* Mall. p. 59, *nigrohirta* Mall. p. 61 from *Oscinosoma* figs., MALLOCH op. cit. 66.

Cadrema key to Australian spp. p. 277; *fasciventris*, *atriventris* spp. n. Australia p. 278, MALLOCH op. cit. 65 1940.

Chaethippus subannulatus see *Hippelates stigmaticus*.

Chlorops unicolor Lw. (= *Ectecephala similis* Beck.) p. 76, SABROSKY Proc. ent. Soc. Wash. 43.

Conioscinella Duda type designated *soluta* Beck. p. 751, SABROSKY Ann. ent. Soc. Amer. 34.—*C.* key to Australian spp. p. 281; *griseopleura* p. 282, *fuscofrontata* p. 283, *mackerrasi* p. 284, *emmesia*, *beckeri* (also Tasmania) p. 285 (with var. n. *grisella*), *perdita*, *flaviseta* p. 287 Australia, *pallidiseta* p. 283, *vandiemeni* p. 285 Tasmania spp. n.; *punctulata* Beck. from *Oscinella* p. 282 figs., MALLOCH Proc. Linn. Soc. N.S.W. 65 1940.

Crassivenula n. n. for *Neuropachys* Thal. nec Heer p. 759, SABROSKY Ann. ent. Soc. Amer. 34.

Cryptonevra Lioy (= *Haplegis* Lw.) pp. 741, 743, SABROSKY t.c.

Cyrtomomyia Beck. type designated *pulchra* Beck. p. 751, SABROSKY t.c.

Dactylothyrea Meij. (= *Elaphaspis* Bez.) type designated *infumata* Meij. p. 751, SABROSKY t.c.

Disciphus Beck. type designated *peregrinus* Beck. p. 752, SABROSKY t.c.

Echimba Duda (= *Syphonerina* Ségué) *annulipes* Duda (= *armata* Ség.) pp. 752, 764, SABROSKY t.c.

Ectecephala revision of N. American spp. pp. 75-80, key p. 76; *sulcata* sp. n. U.S.A. p. 78, SABROSKY Proc. ent. Soc. Wash. 43.—*E. similis* see *Chlorops unicolor*.

Efftayloria n. n. for *Tayloria* Mall. nec Bourg. (Moll.) p. 64, MALLOCH Proc. Linn. Soc. N.S.W. 66.

Elachiptera Mg. (= *Neolachiptera* Ségué) pp. 752, 759, SABROSKY Ann. ent. Soc. Amer. 34.

Elaphaspis see *Dactylothyrea*.

Euchlorops see *Lasiosina*.

Gaurax oecetiphagus sp. n. Argentina p. 20 fig., BLANCHARD Rev. Soc. ent. Argent. 11.—*G. apicipunctata* see *Botanobia*.

Goniaspis Duda (= *Palaeoenderlein-iella* Duda) pp. 753, 761, SABROSKY Ann. ent. Soc. Amer. 34.—*G. truncata* Mall., *scutellaris* Will., *subaequalis* Mall., *equalis* Will. from *Hippelates* p. 27, SABROSKY Canad. Ent. 73.

Goniopsis see *Goniopsita*.

Goniopsita Duda (= *Goniopsis* Duda) type designated *verrucosa* Duda p. 753, SABROSKY Ann. ent. Soc. Amer. 34.—*G. conicola* sp. n. Austria p. 43, HERING Z. PfKrankh. 51 [original not seen].

Haplegis see *Cryptonevra*.

Hippelates Lw. (= *Palaeoconioscinella* Duda pp. 754, 760, *Liohippelates* Duda p. 755), SABROSKY Ann. ent. Soc. Amer. 34.—*H.* key to spp. from U.S.A. p. 23; *pallipes* Lw., *flavipes* Lw. synonymy p. 25; *robertsoni*, *bishoppi* p. 26, *hermsi*, *montanus* spp. n. U.S.A.; *stigmaticus* Duda (= *Chaethippus subannulatus* Mall.); *apicata* Mall. (= *illiacis* Curr.); *pusio* Lw. (= *lituratus* Beck.); *fur* Will. (from *Oscinis*) (= *Oscinella strandi* Duda); *nigripes*

Duda (= *Lioscinella buccalis* Duda); *rufescens* Duda from *Tropidoscinis* and a sp. not var. of *nitens* p. 27, SABROSKY Canad. Ent. 73.—*H. truncata*, *scutellaris*, *subaequalis*, *equalis* see *Goniaspis*.

Lasiambia End. type designated *fycoopera* Beck. p. 754, SABROSKY Ann. ent. Soc. Amer. 34.

Lasiopleura Beck. (= *Omochaeta* Duda) pp. 755, 759, SABROSKY t.c.—*L.* key to Australian spp. p. 268; *exquisita* p. 270, *taylori* spp. n.; *parva* var. n. *pallipes* p. 273 Australia; *griseovitta* ♀ p. 272; *anomala* ♂ p. 273 figs., MALLOCH Proc. Linn. Soc. N.S.W. 65 1940.

Lasiosina Beck. (= *Euchlorops* Mall. from *Milichiidae*) pp. 742, 743, SABROSKY Ann. ent. Soc. Amer. 34.

Leptotrigonum Beck. type designated *obscurum* Schin. p. 743, SABROSKY t.c.

Liohippелates Duda type designated *pugio* Lw. p. 755, SABROSKY t.c.—See *Hippelates*.

Liomicroneurum see *Siphunculina*.

Lioscinella Duda type designated *sulfurihalateralis* End. p. 755, SABROSKY Ann. ent. Soc. Amer. 34.—*L.* Duda revision of Australian spp., keys p. 41; *similis* var. n. *femoralis*; *albiceps* p. 46, *nigropolita*, *albifacies*, *unifrons* p. 47, *waterhousii* p. 48, *cairnsi*, *crassa*, *simulata* p. 49, *predatoris* (Tasmania), *excepta* p. 50, *suturalis*, *varidorsata* p. 51, *discolor*, *pallidipleura* p. 52, *flavo-lateralis*, *sternopleuralis* p. 53, *semiatra*, *minutula* p. 54, *extremitata*, *flavocapitata*, *bivittigera* p. 55, *argenteiceps*, *subopacifrons* p. 56 spp. n. Australia; *biannulata* n.n. for *nigroannulata* Mall. 1931 nec 1925 p. 48; *tinctipes* Mall. from *Oscinosoma* p. 56 figs., MALLOCH Proc. Linn. Soc. N.S.W. 66.—*L. buccalis* see *Hippelates nigripes*.

Lipara australis sp. n. Australia p. 279 figs., MALLOCH Proc. Linn. Soc. N.S.W. 65 1940.

Macrostyla characters; *punctifrons* p. 265, *regina* p. 267 spp. n. Queensland figs., MALLOCH t.c.

Madiza australis sp. n. Australia p. 276 fig., MALLOCH t.c.

Merectecephala Duda type designated *albiseta* Beck. p. 743, SABROSKY Ann. ent. Soc. Amer. 34.

Merodonta gen. n., *crassifemur* sp. n. Queensland p. 263 fig., MALLOCH Proc. Linn. Soc. N.S.W. 65 1940.

Neolachiptera see *Elachiptera*.

Neohippelates nom. nud. p. 252, ROBERTS J.N. York ent. Soc. 42 1939; a synonym of *Stratiomicroneurum* Duda p. 759, SABROSKY Ann. ent. Soc. Amer. 34.

Neoolcanabates Duda type designated *ludervaldi* End. p. 759, SABROSKY t.c.—See *Tropidoscinis*.

Neuropachys see *Crassivenula*.

Omochaeta Duda type designated *specularifrons* End. p. 759, SABROSKY Ann. ent. Soc. Amer. 34.—See *Lasiopleura*.

Oscinella bispinosa see *Oscinelloides*; *noctilux* see *Pseudoformosina*; *strandii* see *Hippelates fur*; *punctulata* see *Conioscinella*.

Oscinelloides gen. n. for *Oscinella bispinosa* Beck. p. 267 figs., MALLOCH Proc. Linn. Soc. N.S.W. 65 1940.

Oscinis fur see *Hippelates*.

Oscinosoma tinctipes see *Lioscinella*; *nigrohirta*, *luteicornis* see *Botanobia*.

Palaeoconioscinella Duda type designated *proboscidea* Will. p. 760, SABROSKY Ann. ent. Soc. Amer. 34.—See *Hippelates*.

Palaeoenderleiniella type designated *rubra* Beck. p. 761, SABROSKY t.c.—See *Goniaspis*.

Palaeogaurax Duda type designated *pallidus* Lw. p. 761, SABROSKY t.c.—See *Prohippелates*.

Paroedesiella End. type designated *styriaca* Strobl p. 761, SABROSKY t.c.

Paroscinella Beck. type designated *acuticornis* Beck. p. 761, SABROSKY t.c.

Prionoscelus Beck. type designated *magnus* Beck. p. 762, SABROSKY t.c.

Prohippелates Mall. (= *Palaeogaurax* Duda) pp. 761, 762, SABROSKY t.c.

Pseudoformosina noctilux Wlk. (= *nicobarensis* Schin.) (type) from *Oscinella* p. 64, MALLOCH Proc. Linn. Soc. N.S.W. 66.

Siphunculina Rond. (= *Liomicroneurum* End.) pp. 755, 763, SABROSKY Ann. ent. Soc. Amer. 34.

Steleocerus Beck. type designated
lepidopus Beck. p. 747, SABROSKY t.c.

Stizambia type designated *aprica* Mg.
p. 764, SABROSKY t.c.

Stratiomicroneurum Duda (= *Neo-*
hippelates Roberts) pp. 759, 764,
SABROSKY t.c.

Syphonerina see *Echimba*.

Tayloria see *Efftayloria*.

Thyridula key to Australian spp.
p. 274, MALLOCH Proc. Linn. Soc.
N.S.W. 65 1940.

Tropidoscinis End. (= *Neolcan-*
bates Duda) pp. 759, 765, SABROSKY
Ann. ent. Soc. Amer. 34.—*T. nitens*
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lopa.

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p. 35, CRESSON Ent. News 52.

Helaeomyia gen. n. for *Psilopa*
petrolei Coq.; *californica* sp. n. Cali-
fornia p. 35, CRESSON t.c.

Hydrellia bergi, johnsoni spp. n.
U.S.A. p. 37, CRESSON t.c.

Mimapsilopa gen. n. for *Clasiopella*
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Drosophila revision of African spp.
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onym of *latifascia* Meij. p. 22; *nasuta*
Lamb (= *albomicans* Duda); *bicolor*
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spp. n.; *finitima* var. n. *gracilipes* S.
Africa p. 39 figs., DUDA Ann. Mus. nat.
Hungar. (Zool.) 33 1940.—*D. virilis*
subsp. n. *americana* Ohio p. 169,
SPENCER Genetics, Menasha 23 1938.—
D. ciliatarsis sp. n. Manchukuo in pp.
288-295, HERING Arb. morph. taxon.

Ent. Berl. 7 1940 [original not seen].—
D. mulleri subsp. n. *mojavensis*; *aldrichi*
sp. n. Texas p. 251, PATTERSON & CROW
Univ. Texas Publ. no. 4032 1940.—*D.*
virilis notes on Texas group pp. 523-
539, PATTERSON Amer. Nat. 75.—*D.*
spp. ejaculatory sac diverticula as
systematic character p. 285 figs.,
ROSENBLAD Amer. Nat. 75; Genetics
26 pp. 165-166.

Pseudiasata brasiliensis sp. n. Brazil
in pp. 103-112 figs., DA COSTA LIMA
in GONÇALVES Physis 17 1940 [original
not seen].

MILICHIIDAE.

Euchlorops transferred to Chloropidae
and synonym of *Lasiosina*, q.v.

CNEMOSPATHIDAE.

Cnemospathidae fam. n. p. 655,
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(Zool.) 1940.

Cnemospathis gen. n. p. 655, *baeck-*
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spp. n. figs., ENDERLEIN t.c.

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MEIJERE Tijdschr. Ent. 84 pp. 13-30,
24 figs. [original not seen].

Cryptochaetum idiocerus p. 132,
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p. 134, *tuberculatum* p. 136 Tanganyika,
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33.

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Coprophila ferruginata var. n. *insulae-*
pasqualis Easter I. p. 678 figs., ENDER-
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Hexaleurodicus ferrisi sp. n. Mexico p. 154 fig., SAMPSON & DREWS t.c.

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berliniae, *diospyros*, *monotes* Hall) from *Pinnaspis* p. 225 fig., HALL J. ent. Soc. Sthrn. Afr. 4.

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Asterolecanium revision 322 pp., characters p. 6, key p. 12; *abietum* (also China) p. 35, *acutulum* p. 38, *brunetae* p. 58, *captiosum* p. 59, *gemmae* p. 97, *oraniae* p. 143, *pinangae* p. 156, *proboscidis* p. 157, *simplex* p. 189, *singularis* p. 190, *unicum* p. 214 Philippines, *adjunctum* Indo-China p. 39, *agavis* p. 40, *grandicolum* p. 100, *luteolum* (also Japan) p. 124, *puteanum* p. 168, *variabile*

(also China) p. 217 U.S.A., *amboinae* Amboina p. 43, *bellum* Italy, Morocco, Hungary, Greece p. 51, *boliviae* Colombia, Bolivia p. 52, *borneense* Br. N. Borneo p. 54, *castaneae* p. 59, *chinae* p. 65, *circulare* p. 66, *disiunctum* p. 79, *elongatum* p. 81, *florum* p. 94, *fusum* p. 95, *largum* p. 118, *longulum* p. 121, *mimicum* p. 130, *minusculum* p. 133, *nitidum* p. 139, *notabile* p. 140, *oblongum* p. 142, *ordinarium* p. 144, *parvum* p. 148, *pericillatum* p. 150, *pusillum* p. 163, *radiatum* p. 175, *skaniae* p. 191, *sparis* p. 193, *subdolum* p. 201, *vulgare* p. 226 China, *degeneratum* Venezuela, Brazil p. 75, *difficile* p. 77, *gilvum* p. 99, *pallidum* p. 145 Panama, *distinctum* Guatemala, Honduras p. 80, *euphorbiae* S. Africa p. 87, *flagellariae* Straits Settlements, Philippines p. 93, *garciniae* p. 96, *javae* p. 116 Java, *horishae* p. 106, *machili* p. 125, *psychotriae* p. 162, *suishae* p. 203 Formosa, *inconspicuum* p. 110, *lacrimula* p. 117, *medium* p. 127, *quadrisetosum* p. 170, *subventuosum* p. 202, *victoriae* p. 221 Australia, *ingae* Porto Rico p. 111, *inlabefactum* Mexico p. 112, *inusitatum* Venezuela p. 113, *launae* Morocco p. 119, *perplexum* p. 151, *sasae* p. 182 Japan, *quaesitum* Argentina p. 171, *repugnans* France, Greece p. 176, *roboris* Spain, Austria p. 177, *sabalis* Cuba p. 180, *scirrosis* China, Philippines, Cuba, Brazil, Antigua, St. Kitts p. 184, *semisepultum* Siam p. 186, *simile* Honduras, Jamaica p. 187, *striatum* Java, Straits Settlements p. 198, *sumatrae* Sumatra p. 204, *truncatum* Mexico, Guatemala, Honduras p. 211, *ungulatum* Singapore, Java p. 213, *viennae* Austria p. 222, *vitreum* N. Zealand p. 225, *zanthenes* Yugoslavia, France, Algeria, Italy p. 227 *spp. n.*; *algeriense* Newst. a valid sp. p. 42; *albidis* Sign. (= *hederae* Licht., *valloti* Licht., *massalongianum* Targ., *thesii* Dgl.) p. 44; *bambusicola* Kuw. (= *tuberculatum* Tak.) p. 49; *brachylenae* Brain raised to sp. p. 55; *ilicicola* Targ. (= *ilicis* Newst.) p. 107; *longum* Green (= *lineare* Green, *lanceolatum* Green) p. 122; *minus* Lind. a valid sp. p. 132; *multiplorum* Green raised to sp. p. 137; *pseudomiliaris* Green (= *charmoyi* Green, *p. bambusifoliae* Tak.) p. 160; *pustulans* Ckll. (= varr. *sambuci* Ckll., *seychellarum* Green p. 165, *morini* Yamet p. 231 (note)); *bornmuelleri* Rübs. a valid sp. p. 229 figs., RUSSELL Misc. Publ. U.S. Dep. Agric. no. 424.

Bakeraspis see *Odonaspis*.

Bantudiaspis gen. n. for *Howardia loranthi* Hall (type), *H. rhusae* Hall p. 225; *faureae* sp. n. S. Rhodesia p. 226 fig., HALL J. ent. Soc. Sthrn. Afr. 4.

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Ceronema koebelei description p. 848 figs., VENKATRAMAN J. Bombay n. H. Soc. 42.—*C. brachystegiae* sp. n. S. Rhodesia p. 232 fig., HALL J. ent. Soc. Sthrn. Afr. 4.

Ceroplastes leonardianus n. n. for *irregularis* Leon. nec Ckll. p. 194, LIZER Y TRELLES Physis 17 1939.—*C. lepagei* sp. n. Brazil p. 9 fig., DA COSTA LIMA Papéis avulsos Dep. Zool. São Paulo 1 1940.

Chortinaspis gen. n. for *Aspidiotus chortinus* Ferr. (type) no. SII-194, *Gonaspidiotus graminellus* Ckll. no. SII-197; *frankliniana* sp. n. N. Mexico no. SII-196 figs., FERRIS Atlas Scale Ins. N. Amer. Ser. II 1938.—*C. consolidata* sp. n. California no. SIII-338; *subchortina* Laing from *Aspidiotus* no. SIII-339 figs., FERRIS op. cit. Ser. III.—*C. inyangae* sp. n. S. Rhodesia p. 222 fig., HALL J. ent. Soc. Sthrn. Afr. 4.

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Cintococcus subgen. n. see *Ripersia*.

Circulaspis bibursa no. SII-157, *fistulella* no. SII-160 Texas, *bibursella* Mexico no. SII-158, *spp. n.* figs., FERRIS Atlas Scale Ins. N. Amer. Ser. II 1938.

Clavaspis MacG. (= *Ferrispis* M., *Hendaspidiotus* M.) no. SII-202; *disclusa* no. SII-205, *texana* no. SII-210 *spp. n.* U.S.A. figs., FERRIS t.c.

Coccomytilus greeni de Charm. from *Lepidosaphes*, re-description p. 31 figs., MAMET Mauritius Inst. Bull. 2.

Comstockaspis see *Quadraspidiotus*.

Costalimaspis cheloniformis, *atibaiensis* see *Trigonaspis*.

Crassaspis gen. n. for *Pseudodiaspis multipora* Ferr. (type) no. SIII-274; *maculata* sp. n. Mexico no. SIII-275 figs., FERRIS Atlas Scale Ins. N. Amer. Ser. III.

Crypticerya rosae notes p. 135 fig., GÓMEZ-MENOR Eos 16.

Dactylaspis flaccida no. SII-139, *serratiloba* no. SII-140, spp. n. Mexico figs., FERRIS Atlas Scale Ins. N. Amer. Ser. II 1938.

Diaspidiotus ancylus Putn. (= *ohioensis* York, *solus* Hunter) no. SII-216; *bumeliae* no. SII-217, *crystallinus* no. SII-220 Texas, *crescentiae* Mexico no. SII-219 spp. n. figs., FERRIS t.c.

Diaspis brevinatis no. SIII-276, *parvinalis* no. SIII-277, *refertinatis* no. SIII-278, spp. n. Panama figs., FERRIS op. cit. Ser. III.—*D. rhusae* see *Furchadiaspis*.

Dinaspis magna sp. n. Panama no. SIII-280 figs., FERRIS Atlas Scale Ins. N. Amer. Ser. III.—*D. kirkianae* sp. n. S. Rhodesia p. 227 fig., HALL J. ent. Soc. Sthrn. Afr. 4.

Duplachionaspis boquetensis sp. n. Panama no. SIII-281 figs., FERRIS Atlas Scale Ins. N. Amer. Ser. III.

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Epidiaspis michoacana Mexico no. SII-141, *salicicola* U.S.A. no. SII-142, spp. n. figs., FERRIS Atlas Scale Ins. N. Amer. Ser. II 1938.—*E. peragrata* Mexico, Panama no. SIII-282, *praecepta* no. SIII-283, *tuta* no. SIII-284 Panama, spp. n. figs., FERRIS op. cit. Ser. III.—*E. ficifoliae* sp. n. S. Rhodesia p. 228 fig., HALL J. Ent. Soc. Sthrn. Afr. 4.

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Eulecanium perinflatum Ckll. from *Lecanium* p. 191, LIZER Y TRELLES Physis 17 1939.

Exuviaspis gen. n. no. SIII-285, *enceliae* sp. n. Mexico no. SIII-286 figs., FERRIS Atlas Scale Ins. N. Amer. Ser. III.

Ferrisaspis see *Clavaspis*.

Fiorinia allaudi, *galliformens* see *Emmereziaspis*.

Forbesaspis see *Quadraspidiotus*.

Furchadiaspis rhusae Brain from *Diaspis* p. 230, HALL J. ent. Soc. Sthrn. Afr. 4.

Gonaspidiotus graminellus see *Chortinaspis*.

Greenoidea lahillei Lizer from *Chrysomphalus* & a sp. not var. of *obscurus* p. 202, LIZER Y TRELLES Physis 17 1939.

Hemiberlesia flabellata sp. n. Mexico no. SII-239; *howardi* Ckll. (= *Quadraspidiotus townsendi* Ckll., *Q. epigaeae* Marl.) no. SII-240; *rapax* Comst. (= *Aspidiotus lucumae* Ckll.) no. SII-244 figs., FERRIS Atlas Scale Ins. N. Amer. Ser. II 1938.—*H. ignobilis* Panama no. SIII-343, *quercicola* U.S.A. no. SIII-344, spp. n. figs., FERRIS op. cit. Ser. III.—*H. simplex* de Char. from *Aspidiotus*, raised to sp. & re-described pp. 23-24 figs., MAMET Mauritius Inst. Bull. 2.

Hemiberlesiella see *Rhizaspidiotus*.

Hendaspidiotus see *Clavaspis*.

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Insaspidiotus see *Acutaspis*.

Laccifer lacca ♀ p. 139; *siamensis* sp. n. Siam p. 140 fig., TAKAHASHI Trans. n. H. Soc. Formosa 31.

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Lattaspidiotus see *Duplaspidiotus*.

Lecanium deltae Lizer from *Mesolecanium* p. 190, LIZER Y TRELLES Physis 17 1939.—*L. perinflatum* see *Eulecanium*.

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Longisomus see *Metadenopus*.

Lyraspis gen. n. for *Lepidosaphes ilicis* Hoke (type), *L. townsendiana* Ckll. no. SII-151 figs., FERRIS Atlas Scale Ins. N. Amer. Ser. II 1938.

Malleolaspis gen. n. no. SIII-290, *mammata* p. SIII-291, *sculpta* (type) no. SIII-292, spp.n. Panama figs., FERRIS op. cit. Ser. III.

Mancaspis gen. n. no. SIII-293, *lunata* (type) Panama no. SIII-294, *piriformis* Mexico no. SIII-295, spp. n. figs., FERRIS t.c.

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Metadenopus Šulc (= *Longisomus* Kir.) *festucae* Kir. discussed p. 41; *festuceli* n. n. for *festucae* Šulc nec Kir. p. 42, Goux Bull. Soc. H. n. Afr. N. 32.

Mitraspis gen. n. no. SIII-296, *heresiarcha* sp. n. Panama no. SIII-297 figs., FERRIS Atlas Scale Ins. N. Amer. Ser. III.

Molluscococcus gen. n. p. 236, *fibrillae* sp. n. S. Rhodesia p. 237 fig., HALL J. ent. Soc. Sthrn. Afr. 4.

Mycetaspis defectopalus sp. n. Texas, Panama no. SIII-371 figs., FERRIS Atlas Scale Ins. N. Amer. Ser. III.

Nicholiella gen. n. no. SIII-298, *bumeliae* sp. n. Arizona no. SIII-299 figs., FERRIS t.c.

Nigridiopsis gen. n. no. SIII-374, *armigera* sp. n. Panama no. SIII-375 figs., FERRIS t.c.

Nilotaspis gen. n. for *Lepidosaphes halli* Green no. SIII-300 figs., FERRIS t.c.

Niveaspis fenestrata Mexico, Panama no. SIII-304, *gracilis* no. SIII-305, *tecta* no. SIII-306, *tenuis* no. SIII-307, *vulcania* no. SIII-308 Panama, spp. n. figs., FERRIS t.c.

Nuculaspis gen. n. for *Aspidiotus californicus* Col. no. SII-250 figs., FERRIS op. cit. Ser. II 1938.—*N. apachea* sp. n. Arizona no. SIII-376 figs., FERRIS op. cit. Ser. III.

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Palinaspis gen. n. for *Targionia quohogiformis* Merr. (type) no. SIII-377; *lobulata* no. SIII-378, *sordidata* no. SIII-380 spp. n. Panama figs., FERRIS op. cit. Ser. III.

Pelliculaspis gen. n. no. SIII-309, *durapyga* no. SIII-310, *pellita* (type) no. SIII-311, spp. n. Panama figs., FERRIS t.c.

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Pinnaspis communis (and varr. *berliniae*, *diospyros*, *monotes*) see *Africaspis*.

Poliaspis argentata sp. n. S. Rhodesia p. 231 fig., HALL J. ent. Soc. Sthrn. Afr. 4.

Prodigiopsis gen. n. no. SIII-312, *septunx* sp. n. Panama no. SIII-313 figs., FERRIS Atlas Scale Ins. N. Amer. Ser. III.

Protodiaspis praetexta Mexico no. SIII-314, *signata* Panama no. SIII-315, spp. n. figs., FERRIS t.c.

Protopulvinaria convexa see *Pulvinaria*.

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from *Trionymus* p. 40, GOUX Bull. Soc. H. n. Afr. N. 32.—*P. pseudobrevipes* sp. n. Mauritius p. 58 fig., MAMET Bull. ent. Res. 32.

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Bovicola chorleyi sp. n. (on *Alcelaphus lelwel roosevelti*) Uganda p. 41, HOPKINS Ann. Mag. n. H. (11) 7.—*B. bovis* p. 196, *equi* p. 197 ♂♂ figs., WERNECK Rev. brasil. Biol. 1.

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p. 533, THOMPSON Ann. Mag. n. H. (11) 7.

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—*E. (Columbicola* Ewing considered a subgen.), *passerinae* (on *Columbagallina p. passerina*) p. 259, *macrourae* (on *Zenaidura macroura carolinensis*) p. 262 spp. n. U.S.A.; *baculoides* genitalia fig. p. 261 figs., WILSON J. Parasit. 27.—*E. absitus* see *Pessoaiella*.

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Nothoserphus gen. n., *mirabilis* sp. n. Formosa in pp. 259-269 figs., BRUES t.c.

Pepsis avitula sp. n. Miocene, Colorado p. 355 fig., COCKERELL Amer. J. Sci. 239.

Plectiscidea lanhami sp. n. Eocene, Colorado p. 354 fig., COCKERELL t.c.

Pseudohymen sylvaensis sp. n. Permian, Urals pp. 8, 47 figs., MARTYNOV Trav. Inst. paléontol. Acad. Sci. U.R.S.S. 11 1940 no. 1.

Sylvohymen gen. n., *robustus* sp. n. Permian, Urals pp. 10, 48 figs., MARTYNOV t.c.

Mecoptera.

Agetochorista intermedia pp. 36, 59, tillyardi pp. 39, 59, spp. n. Permian, Urals figs., MARTYNOV Trav. Inst. paléontol. Acad. Sci. U.R.S.S. 11 1940 no. 1.

Parachorista uralensis sp. n. Permian, Urals pp. 44, 61 figs., MARTYNOV t.c.

Permochorista sylvaensis sp. n. Permian, Urals pp. 43, 61 figs., MARTYNOV t.c.

Sylvopanorpa gen. n., *carpenteri* sp. n. Permian, Urals pp. 42, 60 figs., MARTYNOV t.c.

Diptera.

Palaeotimia from Ulidiidae [Ortaliidae] p. 89 figs., HENNIG Arb. morph. taxon. Ent. Berl. 7 1940 [original not seen].

Plecia undans sp. n. Eocene, Isle of Mull, Scotland p. 94 figs., ZEUNER Ann. Mag. n. H. (11) 7.

Stibadocerites gen. n., *europaeus* sp. n. Eocene, Isle of Mull, Scotland p. 96 fig., ZEUNER t.c.

Siphonaptera.

Palaeopsylla klebsiana further characters pp. 330-333, HENNIG Arb. Morph. taxon. Ent. Berl. 6 1939.

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Revision of N. Russian Prosbolidae, BECKER-MIGDISOVA Trav. Inst. paléontol. Acad. Sci. U.R.S.S. 11 1940 no. 2 pp. 1-79, 6 pls., 60 figs.

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Calisius balticus sp. n. Baltic Amber p. 95 figs., USINGER Psyche 48.

Davispia gen. n. p. 288, *bearcreekensis* sp. n. Palaeocene, Montana p. 289 figs., COOPER Amer. J. Sci. 239.

Eocercopis gen. n., *maculata* sp. n. Eocene, Isle of Mull, Scotland p. 88 figs., ZEUNER Ann. Mag. n. H. (11) 7.

Leptoserinetha gen. n., *navicularis* sp. n. France, Oligocene p. 362 fig., THÉOBALD Insectes foss. terr. oligoc. France 1937.

Maleojassus gen. n., *primitivus* sp. n. Eocene, Isle of Mull, Scotland p. 90 figs., ZEUNER Ann. Mag. n. H. (11) 7.

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Permocicada key p. 31; *integra* pp. 32, 75, *triramosa*, *sublata* pp. 40, 76, *perlata* pp. 41, 76, *pusilla* pp. 42, 76, *incomplete* pp. 43, 77, spp. n.; *nigro-nervosa* var. n. *longifurcata* pp. 39, 76 Permian, N. Russia figs., BECKER-MIGDISOVA Trav. Inst. paléontol. Acad. Sci. U.R.S.S. 11 1940 no. 2.—*P. angustata*, *insignis* see *Permocicadopsis*.

Permocicadopsis gen. n. for *Permocicada angustata* Mart. (type) pp. 54, 78, *P. insignis* Mart. p. 64, *Sojanoneura aberrans* Mart. p. 63; key p. 55; *letopalensis* sp. n. pp. 56, 78; *angustata* varr. n. *longifurcillata* p. 57, *typica*, *brevifurcillata* p. 58, *devia* p. 59, *remota* p. 60 Permian, N. Russia figs., BECKER-MIGDISOVA Trav. Inst. paléontol. Acad. Sci. U.R.S.S. 11 1940 no. 2.

Prostbole key p. 12; *similis* pp. 15, 72, *zekkeli* pp. 16, 72, *affinis*, *nodosa* pp. 19, 73, *indistincta*, *curvinmarginata* pp. 20, 73, *cellulifera* pp. 21, 73, *propinqua* pp. 25, 74, *incerta* pp. 25, 75, *brevialata* pp. 26, 74, *longialata* pp. 27, 74, *ivagorae* pp. 28, 74, *permocicadoides* pp. 28, 75, spp. n.; *sojanensis* abb. n. *disjuncta*, *simplificata* pp. 17, 72, *imperia* pp. 18, 73 Permian, N. Russia figs., BECKER-MIGDISOVA t.c.

Protazteca hendersoni Kkll. (= *elongata* Carp.) p. 356, COCKERELL Amer. J. Sci. 239.

Sojanoneura key p. 44; *tincta* pp. 47, 77, *innominata* p. 52, *zekkeliana* pp. 54, 78 spp. n. Permian, N. Russia figs., BECKER-MIGDISOVA Trav. Inst. paléontol. Acad. Sci. U.R.S.S. 11 1940 no. 2.—*S. aberrans* see *Permocicadopsis*.

Tylocomnus creedensis sp. n. Miocene, Colorado p. 355 fig., COCKERELL Amer. J. Sci. 239.

Plecoptera and Paraplecoptera.

Euplecoptera n. n. for recent Plecoptera pp. 31, 56, MARTYNOV Trav. Inst. paléontol. Acad. Sci. U.R.S.S. 11 1940 no. 1.

Euryptilon gen. n., *blattoides* sp. n. Permian, Urals pp. 16, 51 figs., MARTYNOV t.c.

Euryptilonidae fam. n. pp. 15, 50, MARTYNOV t.c.

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Permoplecoptera subord. n. pp. 31, 56, ROHDENDORF t.c.

Plecoptera see Euplecoptera.

Sylvaphlebia gen. n. pp. 18, 51, *tuberculata* sp. n. pp. 18, 52 Permian, Urals figs., MARTYNOV Trav. Inst. paléontol. Acad. Sci. U.R.S.S. 11 1940 no. 1.

Sylvaphlebiidae fam. n. pp. 18, 51, ROHDENDORF t.c.

Sylvidelia gen. n., *latipennis* sp. n. Permian, Urals pp. 19, 52 figs., MARTYNOV t.c.

Protopterygaria.

Khosarophlebia gen. n. pp. 25, 54, *sylvaensis* sp. n. pp. 25, 55 Permian, Urals figs., MARTYNOV Trav. Inst. paléontol. Acad. Sci. U.R.S.S. 11 1940 no. 1.

Parasylviodes gen. n. pp. 23, 54, *tetracladus* sp. n. pp. 24, 54 Permian, Urals figs., MARTYNOV t.c.

Sylviodes gen. n., *perlodes* sp. n. Permian, Urals pp. 23, 54 figs., MARTYNOV t.c.

Sylvioididae fam. n. pp. 23, 53, MARTYNOV t.c.

Orthoptera and Protorthoptera.

Fossil Catantopinae, ZEUNER Ann. Mag. n. H. (11) 8 pp. 510-522.

Metoeidischia longipes sp. n. Permian, Urals pp. 34, 58 figs., MARTYNOV Trav. Inst. paléontol. Acad. Sci. U.R.S.S. 11 1940 no. 1.

Sindon uralensis sp. n. Permian, Urals pp. 13, 49 figs., MARTYNOV t.c.

Strephoneura gen. n. pp. 14, 50, *robusta* sp. n. pp. 15, 50 Permian, Urals figs., MARTYNOV t.c.

Strephoneuridae fam. n. pp. 14, 50, MARTYNOV t.c.

Miomoptera.

Palaeomantis sylvaensis sp. n. Permian, Urals pp. 33, 57 figs., MARTYNOV Trav. Inst. paléontol. Acad. Sci. U.R.S.S. 11 1940 no. 1.

Palaeomantisca gen. n., *lata* sp. n. Permian, Urals pp. 33, 57 fig., MARTYNOV t.c.

Meganisoptera.

Arctotypus sylvaensis sp. n. Permian, Urals pp. 12, 49 figs., MARTYNOV Trav. Inst. paléontol. Acad. Sci. U.R.S.S. 11 1940 no. 1.

Megasectopectera.

Euchoroptera gen. n., *longipennis* sp. n. Carbon., Kansas p. 636 figs., CARPENTER Amer. J. Sci. 238 1940.

Palaeodictyoptera.

Permiakovia gen. n., *quinquefasciata* sp. n. Permian, Urals pp. 7, 46 figs., MARTYNOV Trav. Inst. paléontol. Acad. Sci. U.R.S.S. 11 1940 no. 1.

Protanisoptera.

Ditaxineurella gen. n., *stigmatis* sp. n. Permian, Urals pp. 11, 48 figs., MARTYNOV Trav. Inst. paléontol. Acad. Sci. U.R.S.S. 11 1940 no. 1.

Inc. Sed.

Czekardia gen. n. pp. 27, 55, *blattoides* sp. n. pp. 27, 56, Permian, Urals figs., MARTYNOV Trav. Inst. paléontol. Acad. Sci. U.R.S.S. 11 1940 no. 1.

Sylvaella gen. n. (MARTYNOV), *paurovenosa* sp. n. (ROHDENDORF) Permian, Urals pp. 26, 55 figs., t.c.

Sylvaellidae fam. n. pp. 26, 55, MARTYNOV t.c.

ERRATA.

Vol. lxii, 1925, p. 403, col. 1, for "*Ptycha*" read "*Ptycia*"

Vol. lxiii, 1926, p. 282, col. 2, for "*Sugitana*" read "*Sugitania*"

Vol. lxiii, 1926, p. 316, col. 2, for "*Hedula*" read "*Hedulia*"

Vol. lxv, 1928, p. 221, col. 2, transfer "*Vesperus*" to CERAMBYCIDAE

Vol. lxvi, 1929, p. 354, col. 2 and p. 357, col. 1, for "*Trichoprosopa*" read "*Trichoprosopus*"

Vol. lxvii, 1930, p. 203, col. 1, transfer "*Zatrephus*" to CERAMBYCIDAE

Vol. lxvii, 1930, p. 294, col. 1, for "*Idiopedinaspis*" read "*Idopedinaspis*"

Vol. lxvii, 1930, p. 355, col. 1, transfer "*Calliphoroides*" to MUSCIDAE

Vol. lxviii, 1931, p. 318, col. 2, for "*Gnathotoma*" read "*Gnathotona*"

Vol. lxix, 1932, p. 228, col. 1, 6 lines from end and col. 2, for "*Paracorssidius*" read "*Paracorssidius*"

Vol. lxix, 1932, p. 375, col. 2, transfer "*Dictya*" to SCIOMYZIDAE

Vol. lxx, 1933, p. 332, col. 1, for "*Ptochisiphla*" read "*Ptochosiphla*"

Vol. lxxi, 1934, p. 254, col. 2, for "*Hudramorphocelus*" read "*Hudramorphocephalus*"

Vol. lxxi, 1934, p. 349, col. 2, after "*Plectophila*" delete "gen. n."

Vol. lxxi, 1934, p. 386, col. 2, for "*Stiphrolamyia*" read "*Stiphrolamyra*"

Vol. lxxii, 1935, p. 383, col. 2, and Vol. lxxiii, 1936, p. 385, col. 2, transfer "*Pachyophthalmus*" to CALLIPHORIDAE

Vol. lxxii, 1935, p. 388, col. 1, transfer "*Dicephalomylia*" to TACHINIDAE

Vol. lxxii, 1935, p. 389, col. 1, and p. 390, col. 1, transfer "*Onesia*" and "*Trichostenomitra*" to CALLIPHORIDAE

Vol. lxxii, 1935, p. 389, col. 2, transfer "*Stilbomyella*" to TACHINIDAE

Vol. lxxii, 1935, p. 438, col. 1, for "*Sojaneura*" read "*Sojanoneura*"

Vol. lxxiii, 1936, p. 115, No. 2425, for "XXXVI" read "XXVI" and p. 286, col. 2, lines 31, 45; p. 287, col. 1, lines 3, 25, col. 2, lines 3, 17, 31, 39; p. 288, col. 1, lines 3, 31, 39, col. 2, lines 21, 31, 37, 53, for "36" read "26"

Vol. lxxiii, 1936, p. 385, col. 1, transfer "*Lasiopleura*" to CHLOROPIDAE

Vol. lxxiii, 1936, p. 388, col. 1, transfer "*Phyllogaster*" and "*Protofucellia*" to ANTHOMYIDAE

Vol. lxxiii, 1936, p. 432, col. 2, after "*Hemilandreva*" insert "gen. n."

Vol. lxxv, 1938, p. 44, No. 829, for "*Orycte*" read "*Oryctes*"

Vol. lxxv, 1938, p. 73, No. 1485, for "*Thomson*" read "*Thomsen*"

Vol. lxxv, 1938, p. 257, col. 1, for "*Trichlorhyssenus*" read "*Trichiorhyssenus*"

Vol. lxxv, 1938, p. 277, col. 2, line 10 and p. 280, col. 1, line 2, for "subgen. n." read "subgen."

Vol. lxxv, 1938, p. 336, col. 1, transfer "*Ocneria*" to LYMANTRIIDAE

Vol. lxxv, 1938, p. 382, col. 2, lines 30, 35, for "*Trepinaria*" read "*Trepidaria*"

- Vol. lxxvi, 1939, p. 293, col. 1, for "*Wesonychium*" read "*Mesonychium*"
- Vol. lxxvi, 1939, p. 304, col. 2, 8 lines from end, for "*Rareta*" read "*areta*"
- Vol. lxxvi, 1939, p. 306, col. 1, for "*Tropidiophryne*" read "*Tropidophryne*"
- Vol. lxxvii, 1940, p. 134, col. 1, for "*Immalthodes*" read "*Inmalthodes*"
- Vol. lxxvii, 1940, p. 137, col. 2 and p. 138, col. 2, line 3, for "*Ocneria*" read "*Ocnera*"
- Vol. lxxvii, 1940, p. 137, col. 2, line 10, for "p. 257" read "p. 237"
- Vol. lxxvii, 1940, p. 159, col. 1, for "*Presates*" read "*Phesates*"
- Vol. lxxvii, 1940, p. 171, col. 1, for "PROCTOTRUPIDAE (SERPHIDAE)" read
SCELIONIDAE
- Vol. lxxvii, 1940, p. 172, col. 2, 8 lines from end, after "*Xenocomys*" insert
"gen. n."
- Vol. lxxvii, 1940, p. 187, lines 11, 39, for "*Mosada*" read "*Mosoda*"
- Vol. lxxvii, 1940, p. 189, col. 2, transfer "*Lophonotidia*" and "*Mazuca*" to
AGARISTIDAE
- Vol. lxxvii, 1940, p. 191, col. 1, transfer "*Dasycorsa*" to GEOMETRIDAE
- Vol. lxxvii, 1940, p. 195, col. 2, transfer "*Clysia*" and "*Clysiana*" to
TORTRICIDAE
- Vol. lxxvii, 1940, p. 198, col. 1, 2 lines from end, and col. 2, line 4, for "*Siaphila*"
read "*Sciaphila*"
- Vol. lxxvii, 1940, p. 228, col. 1, for "*Vespius*" read "*Vesbius*"
- Vol. lxxvii, 1940, p. 236, col. 1, for "*Liotetothrips*" read "*Litotetothrips*"
- Vol. lxxvii, 1940, p. 252, col. 2, for "*Microentomum*" read "*Microentomon*"
- Vol. lxxvii, 1940, p. 262, 7 lines from end, for "*Pseudocynusa*" read
"*Pseudocyusa*"

14. PROTOCHORDATA

INCLUDING

ENTEROPNEUSTA AND PTEROBRANCHIA

BY

M. BURTON, D.Sc.

I.—TITLES.

1.—**Bassindale, R.** Studies on the biology of the Bristol Channel. Proc. Bristol Nat. Soc. (4) 9 (2) 1941. [Tunicates p. 199.]

2.—**Beebe, W.** and **Tee-Van, J.** Fishes from the Tropical Eastern Pacific. [From Cedros Island, Lower California, South to the Galapagos Islands and Northern Peru.] Part I. Lancelets and Hag-fishes. Zoologica New York 26 1941 pp. 89–91 2 figs.

3.—**Berrill, N. J.** The development of a colonial organism: *Symplesma viride*. Biol. Bull. Woods Hole 79 1940 pp. 272–281 5 figs.

4.—**Brambell, F. N. R.** and **Goodhart, C. B.** *Saccoglossus horsti* sp. n., an Enteropneust occurring in the Solent. J. Mar. biol. Ass. Plymouth 25 (2) 1941 pp. 283–301 8 figs.

Branson, J. see **Byrne, F.**

5.—**Byrne, F.** and **Branson, J.** Permian organic burrows. Trans. Kansas Acad. Sci. 44 1941 pp. 257–261 figs. 1–6.

6.—**Bullock, T. H.** The functional organisation of the nervous system of Enteropneusta. Biol. Bull. Woods Hole 79 1940 pp. 91–113 2 figs.

7.—**Chin, T. G.** Studies on the biology of the Amoy amphioxus, *Branchiostoma belcheri* Gray. Philipp. J. Sci. Manila 75 (4) 1941 pp. 369–424 5 pls. 18 figs.

8.—**Devanesan, D. W.** and **Varadachari, S.** The occurrence of "Tornaria larva" at Krusadai. Current Sci. Bangalore 9 (8) 1940 pp. 375–377 2 figs.

9.—**Fowell, R. R.** Living communities harboured by Oar-weeds (*La-*

minaria). Proc. Swansea Sci. Field Nat. Soc. 2 (3) 1939. [Tunicates p. 103.]

Goodhart, C. B. see **Brambell, F. N. R.**

10.—**Gorbman, A.** Identity of an iodine-storing tissue in an Ascidian. Science N.Y. N.S. 94 (2434) 1941 p. 192.

11.—**Grave, C.** and **Nicoll, P. A.** Studies of larval life and metamorphosis in *Ascidia nigra* and species of *Polyandrocarpa*. Pap. Tortugas Lab. Carn. Instn. 32 1940 pp. 1–46 7 figs.

12.—**Hilton, W. H.** Nervous System and Sense-Organs: LXXXIX. Tunicata J. Ent. Zool. Claremont Cal. 33 1941 pp. 44–53 2 figs.

13.—**Hilton, W. H.** Nervous System and Sense-Organs: XC. Ascidians (continued). J. Ent. Zool. Claremont Cal. 33 1941 pp. 61–63 1 fig.

14.—**Hilton, W. H.** Nervous System and Sense-Organs: XCI. Amphioxus (Branchiostoma). J. Ent. Zool. Claremont Cal. 33 1941 pp. 64–74 3 figs.

Jones, N. see **Plough, H. H.**

15.—**Kasas, O. M.** Structure of the larvae of Ascidians *Dendrodoa grossularia* and their metamorphosis. Bull. Acad. Sci. U.R.S.S. Biol. 1940 (6) pp. 862–883 16 figs. [Russian, with English summary.]

16.—**Kozlowski, R.** Informations préliminaires sur les Graptolithes du Tremadoc de la Pologne et sur leur portée théorique. Ann. Mus. Zool. Polon. 13 (16) 1938 pp. 183–196.

17.—**Morgan, T. H.** The genetic and the physiological problems of self-sterility in *Ciona*. V. The genetic problem. J. exp. Zool. Philadelphia 90 1942 pp. 199–228.

Nicoll, P. A. *see* Grave, C.

18.—Paul, M. D. Studies on the growth and breeding of certain sedentary organisms in the Madras harbour. *Proc. Indian Acad. Sci.* **15B** 1 1942. [Tunicates pp. 14–16.]

19.—Plough, H. H. and Jones, N. *Ecteinascidia tortugensis*, species nova. With a review of the Perophoridae (Asciadiacea) of the Tortugas. *Pap. Tortugas Lab. Carn. Instn.* **32** 1940 pp. 47–60 5 pls.

Richards, O. W. *see* Spence, J.

20.—Spence, J. and Richards, O. W. Native cellulose in the Ascidian *Phallusia nigra*. *Pap. Tortugas Lab. Carn. Instn.* **32** 1940 pp. 163–167.

Tee-Van, J. *see* Beebe, W.

21.—Tucker, G. H. The anatomy of the gonads of an Ascidian, *Styela plicata* Lesueur. *J. Elisha Mitchell Sci. Soc. Chapel Hill* **57** (2) 1941 p. 215.

Varadarajan, S. *see* Devanesan, D. W.

22.—Waterman, A. J. The action of drugs on the compound Ascidian, *Perophora viridis*, as indicated by the activity of the intact heart. *Physiol. Zoöl. Chicago* **15** 1942 pp. 61–74 5 figs.

23.—Wolf, H. Über die Beeinflussung der Kreislauf-tätigkeit bei *Amphioxus lanceolatus* Y. *Pflüger's Arch.* **244** 1941 pp. 736–748 2 figs.

II.—SUBJECT INDEX.

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III.—SYSTEMATIC INDEX.

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Chlamydothorax (*Ptychodera*) *krusadaiensis* sp. n. Indian Ocean, DEVANESAN & VARADARAJAN *Current Sci. Bangalore* **9** (8) 1940 p. 375.

Dendrodoa grossularia metamorphosis, KASAS 15.

Ecteinascidia tortugensis sp. n. U.S.A. (Atlantic), PLOUGH & JONES *Pap. Tortugas Lab. Carn. Instn.* **32** 1940 p. 47 pls. 1–5.

Polyandrocarpa, larval life and metamorphosis, GRAVE & NICOLL, 11.

Styella plicata anatomy of gonad, TUCKER, 21.

HEMICHORDATA.

Saccoglossus horsti sp. n. England, BRAMBELL & GOODHART *J. Mar. Biol. Ass. Plymouth* **25** (2) 1941 p. 283 figs. 1–8.

CEPHALOCORDATA.

Branchiostoma belcheri biology, ecology and economics, CHIN, 7.

PTEROBRANCHIA.

†*Graptolites* = *Pterobranchia*, KOZŁOWSKI Ann. Mus. Zool. Polon. **13** (16) 1938 p. 183.

†*Eocephalodiscus* **gen. n.**, type=*E. polonicus* **sp. n.** Cambrian Poland, KOZŁOWSKI Ann. Mus. Zool. Polon. **13** (16) 1938 p. 186.

†*Graptoblastoides* **gen. n.**, *indecisus*, *lamellatus* **spp. n.** Cambrian Poland, KOZŁOWSKI Ann. Mus. Zool. Polon. **13** (16) 1938 p. 186.

†*Graptoblastus* **gen. n.**, *planus* et var. *tenuicostata*, *cristatus*, *rotundicostatus*, *tectiformis*, *planissimus*, *convexus*, *longis-*

simus, *cinctus*, *exfoliatus*, *gigas* **spp. n.** Cambrian Poland, KOZŁOWSKI Ann. Mus. Zool. Polon. **13** (16) 1938 p. 186.

†*Graptovermis* **gen. n.**, *spiralis*, *intestinalis* **spp. n.** Cambrian Poland, KOZŁOWSKI Ann. Mus. Zool. Polon. **13** (16) 1938 p. 186.

PHORONIDA.

(Vacant).

INCERTAE SEDIS.

†*Upsiloides* **gen. n.**, *permiana* **sp. n.** Permian U.S.A., BYRNE & BRANSON Trans. Kansas Acad. Sci. **44** 1941 p. 261 figs. 1-6.

16.—Auger, D. and Fessard, A. Mesure et interprétation du potential de repos de l'organe électrique chez *Torpedo marmorata*. C.R. Soc. Biol. Paris 134 7 1940 pp. 444-446.

Auger, D. See Albe, D.

17.—Aumonier, F. J. Development of the dermal bones of the skull in *Lepidosteus osseus*. Quart. J. micr. Biol. London N.S. 83 1941 pp. 1-33 pls. i-viii.

18.—Azevedo, P. de and Vieira, B. B. Realizações da comissão técnica de piscicultura do nordeste. Arq. Inst. Biol. São Paulo 11 1940 pp. 23-38 pls. iii-viii.

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19.—Bailey, R. M. *Hadropterus nasutus*, a new darter from Arkansas. Occ. Pap. Mus. Zool. Univ. Mich. No. 440 1941 8 pp. 1 pl.

20.—Bailey, R. M. Geographic variation in *Mesogonistius chaetodon* (Baird), with description of a new subspecies from Georgia and Florida. Occ. Pap. Mus. Zool. Univ. Mich. No. 454 1941 7 pp. 1 pl.

21.—Bailey, R. M. The scientific name of the black crappie. Copeia Ann Arbor 1941 pp. 21-22.

22.—Baldwin, F. M. and Goldin, H. S. Effect of testosterone propionate on anal fin transformation of female viviparous teleost, *Xiphophorus helleri* Heckel. Proc. Soc. exp. Biol. 46 1941 pp. 283-284.

23.—Bamford, T. W. The lateral line and related bones of the herring (*Clupea harengus* L.). Ann. Mag. nat. Hist. (11) 8 1941 pp. 414-438 pl. iv 13 text-figs.

24.—Bangham, R. V. Parasites from fish of Buckeye Lake, Ohio. Ohio J. Sci. 41 1941 pp. 441-448.

25.—Banta, A. M. Another avivorous angler or goosefish. Science N.Y. N.S. 93 1941 p. 158.

26.—Barbour, T. A new Cuban star-gazer. Proc. New Engl. Zool. Cl. 19 1941 pp. 1-2.

27.—Barbour, T. Notes on Pediculate fishes. Proc. New Engl. Zool. Cl. 19 1941 pp. 7-14 pls. ii-vii.

28.—Barbour, T. Notes on two African fishes. Copeia Ann Arbor 1941 pp. 39-40.

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16. AMPHIBIA AND REPTILIA.

ARRANGED BY

MALCOLM A. SMITH.

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17. AVES

ARRANGED BY

W. L. SCLATER, M.A.

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I.—TITLES.

The present section of avian bibliography is necessarily incomplete as so much of the literature is now inaccessible during the present time. I have to thank Dr. E. Mayr, of the American Museum of Natural History, for very considerable help in sending me lists of papers published in the German journals—*Journ. Ornith and Orn. Monatsb.*—which have reached America but not this country, and also for valuable lists of papers published in various other journals which I have not been able to see. All such titles are marked N.V.

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The Subject Index has been rearranged in accordance with a scheme prepared by the Editor of the Record, in collaboration with the Recorders, to bring this portion of the volume into greater uniformity than has hitherto been the case. The headings and sub-headings are given in a pamphlet "Memorandum to Recorders" issued in January, 1941, under the authority of the Zoological Record Committee.

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Full references are given only in the cases of new genera and species. In other cases the numeral in larger Clarendon refers to the List of Titles, where the full reference will be found. The figures in smaller Clarendon refer to the volume number of the full reference.

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18. MAMMALIA.

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†*Plesianthropus* and *Paranthropus* metrical study of the dentition, SENYÛREK. 707.

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